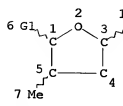
McIntosh
10/602694

(FILE 'REGISTRY' ENTERED AT 11:49:33 ON 24 MAY 2004)

L1 STR



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VAR G1=8/9
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS PCY AT 9
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS E4 C E2 N AT 8
ECOUNT IS E5 C E4 N AT 9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE
L2 283 SEA FILE=REGISTRY SSS FUL L1
L3 249 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND 1/NC

(FILE 'HCAPLUS' ENTERED AT 11:50:16 ON 24 MAY 2004)
L4 88 SEA ABB=ON PLU=ON L3
L5 13 SEA ABB=ON PLU=ON L4 AND (?FLAVIVIR? OR ?PESTIVIR? OR (?FLAVI OR ?PESTI)(W)(VIRUS OR VIRID?) OR DENGUE OR WEST NILE OR (YELLOW OR BREAKBONE OR BREAK BONE)(W)FEVER OR BVDV OR HEPATIT? C OR HCV OR BOVINE VIRAL DIARRH? OR EGYPT 101 OR KUNJIN)

E7 THROUGH E136 ASSIGNED

L5 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 08 Apr 2004
ACCESSION NUMBER: 2004:290484 HCAPLUS
DOCUMENT NUMBER: 140:327061
TITLE: Nucleoside derivatives for treating **hepatitis C** virus infection
INVENTOR(S): Roberts, Christopher Don; Dyatkina, Natalia B.
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., USA
SOURCE: PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004028481	A2	20040408	WO 2003-US31433	20030930

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-415222P P 20020930
US 2003-443169P P 20030129

OTHER SOURCE(S): MARPAT 140:327061

AB Nucleoside compns. and methods for treating **hepatitis C** virus infections. Thus, 9-(2'-C-methyl-β-D-ribofuranosyl)-6-methoxyaminopurine was prepared by the reaction of 6-chloro-9-(2'-C-methyl-β-D-ribofuranosyl)purine and methxylamine. This compound exhibited anti-**hepatitis C** activity by inhibiting **HCV** polymerase.

IT **565435-18-9P 677298-62-3P**
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(nucleoside derivs. for treating **hepatitis C** virus infection)

IT **565435-24-7P 677298-77-0P 677298-83-8P 677298-96-3P 677298-97-4P 677298-98-5P 677298-99-6P 677299-00-2P 677299-01-3P 677299-02-4P 677299-03-5P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleoside derivs. for treating **hepatitis C** virus infection)

IT **622379-57-1 622379-58-2 622379-59-3 622379-62-8 622379-63-9 622379-74-2 622380-50-1 677299-18-2**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside derivs. for treating **hepatitis C** virus infection)

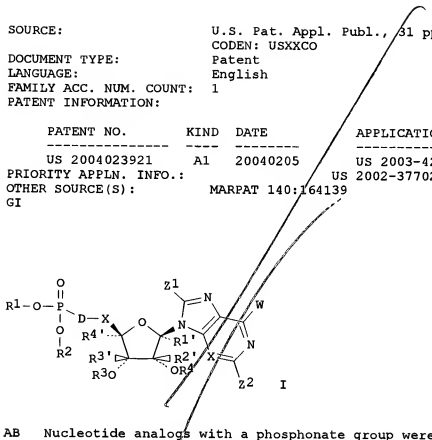
IT **205171-05-7P 677298-68-9P 677299-06-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleoside derivs. for treating **hepatitis C** virus infection)

L5 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 08 Feb 2004
ACCESSION NUMBER: 2004:100802 HCAPLUS
DOCUMENT NUMBER: 140:164139
TITLE: Antiviral phosphonate nucleotide analogs
INVENTOR(S): Hong, Zhi; Koh, Yung-Hyo; Shim, Jae Hoon; Girardet, Jean-Luc
PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 31 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004023921	A1	20040205	US 2003-426507	20030429
PRIORITY APPLN. INFO.:			US 2002-377024P P	20020430

OTHER SOURCE(S): MARPAT 140:164139
GI



AB Nucleotide analogs with a phosphonate group were prepared and act as a substrate and/or inhibitor of a viral polymerase, and especially of the **HCV** RNA dependent RNA polymerase. E.g., I was prepared and this and other compds. were tested for inhibition and/or incorporation into an RNA product by the **HCV** RNA-dependent RNA polymerase.

IT **454423-92-8P 654075-09-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(antiviral phosphonate nucleotide analogs)

L5 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 11 Jan 2004
ACCESSION NUMBER: 2004:20801 HCAPLUS
DOCUMENT NUMBER: 140:70987
TITLE: Nucleoside derivatives as inhibitors of RNA-dependent RNA viral polymerase
INVENTOR(S): Olsen, David B.; Maccoss, Malcolm; Bhat, Balkrishen; Eldrup, Anne B.
PATENT ASSIGNEE(S): Merck & Co., Inc., USA; Isis Pharmaceuticals, Inc.
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003138	A2	20040108	WO 2003-US19776	20030623

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-392438P P 20020627

OTHER SOURCE(S): MARPAT 140:70987

AB The invention provides nucleoside compds. and certain derivs. thereof which are inhibitors of RNA-dependent RNA viral polymerase. These compds. are inhibitors of RNA-dependent RNA viral replication and are useful for the treatment of RNA-dependent RNA viral infection. They are particularly useful as inhibitors of **hepatitis C** virus (**HCV**) NS5B polymerase, as inhibitors of **HCV** replication, and/or for the treatment of **hepatitis C** infection. The invention also describes pharmaceutical compns. containing such nucleoside compds. alone or in combination with other agents active against RNA-dependent RNA viral infection, in particular **HCV** infection. Also disclosed are methods of inhibiting RNA-dependent RNA polymerase, inhibiting RNA-dependent RNA viral replication, and/or treating RNA-dependent RNA viral infection with the nucleoside compds. of the invention. Preparation of nucleoside derivs. is included.

IT **641571-38-2P 641571-39-3P 641571-40-6P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase)

IT **640725-74-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase, and use with other agents)

L5 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 11 Jan 2004
ACCESSION NUMBER: 2004:20697 HCAPLUS
DOCUMENT NUMBER: 140:87662
TITLE: 2'- and 3'-nucleoside prodrugs for treating **Flaviviridae** infections
INVENTOR(S): Sommadossi, Jean-pierre; La Colla, Paolo; Storer, Richard; Gosselin, Gilles
PATENT ASSIGNEE(S): Idenix (Cayman) Limited, Cayman I.; Centre National de la Recherche Scientifique; Universita Degli Studi di Cagliari
SOURCE: PCT Int. Appl., 2498 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003000	A2	20040108	WO 2003-IB3901	20030627

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-392350P P 20020628
US 2002-392351P P 20020628
US 2003-466194P P 20030428
US 2003-470949P P 20030514

OTHER SOURCE(S): MARPAT 140:87662

AB 2' And 3'-Prodrugs of 1'-, 2'-, 3'-, or 4'-branched β-D or β-L nucleosides, or their pharmaceutically acceptable salts and derivs., are described which are useful in the prevention and treatment of **Flaviviridae** infections and other related conditions. These modified nucleosides provide superior results against **flaviviruses** and **pestiviruses**, including **hepatitis C** virus and viruses generally that replicate through an RNA-dependent RNA reverse transcriptase. Compds., comps., methods and uses are provided for the treatment of **Flaviviridae** infection, including **HCV** infection, that include the administration of an effective amount of the prodrugs of the invention, or their pharmaceutically acceptable salts or derivs. These drugs may optionally be administered in combination or alternation with further antiviral agents to prevent or treat **Flaviviridae** infections and other related conditions. Preparation of compds. of the invention is included.

IT **20724-73-6P**
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(nucleoside prodrugs for treating **Flaviviridae** infections)

IT **15397-12-3 31448-54-1 374750-30-8 640725-73-1 640725-74-2 640725-77-5**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside prodrugs for treating **Flaviviridae** infections)

IT **640725-70-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleoside prodrugs for treating **Flaviviridae** infections)

IT **205171-05-7 374750-32-0 565450-78-4 622381-09-3**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside prodrugs for treating **Flaviviridae** infections, and use with other agents)

L5 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 11 Jan 2004

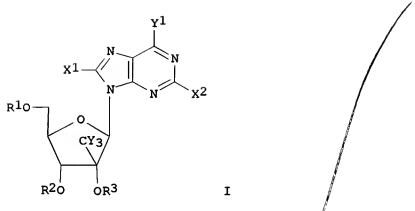
ACCESSION NUMBER: 2004:20696 HCAPLUS
DOCUMENT NUMBER: 140:77365
TITLE: Preparation of modified 2'- and 3'-nucleoside prodrugs for treating **Flaviviridae** infections
INVENTOR(S): Sommadossi, Jean-pierre; La Colla, Poalo; Storer, Richard; Gosselin, Gilles
PATENT ASSIGNEE(S): Idenix (Cayman) Limited, Cayman I.; Universita degli studi di Cagliari; Centre National de la Recherche Scientifique
SOURCE: PCT Int. Appl., 201 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004002999	A2	20040108	WO 2003-IB3246	20030627

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:
US 2002-392350P P 20020628
US 2002-392351P P 20020628
US 2003-466194P P 20030428
US 2003-470949P P 20030514

OTHER SOURCE(S): MARPAT 140:77365
GI



I

AB 2' And/or 3' prodrugs of 1', 2', 3' or 4'-branched-nucleosides I, wherein R1-R3 are independently H, phosphate, alkyl, acyl, CO-alkyl, CO-aryl, CO-alkoxyalkyl, CO-aryloxyalkyl, CO-substituted aryl, sulfonate ester, benzyl, wherein the Ph group is optionally substituted with one or more substituents, alkylsulfonyl, arylsulfonyl, aralkylsulfonyl, lipid, amino acid, carbohydrate, peptide, cholesterol; Y1 is hydrogen, bromo, chloro, fluoro, iodo, CN, OH, OR4, NH2, NHR4, NR4R5, SH or SR4; X1 and X2 are independently alkyl, CH3, CF3, CY3, 2-Br-Et, CH2F, CH2Cl, CH2CF3, CF2CF3, CY2CY3, CH2OH, alkenyl, alkynyl, COOH, COOR4, COO-alkyl, COO-aryl, CO-O-alkoxyalkyl, CONH2, CONHR4, CON(R4)2, halo, CN, N3, OH, OR4, NH2, NHR4, NR4R5, SH or SR5; Y is independently H, halo; and each R4 and R5 is independently hydrogen, acyl, alkyl, lower alkyl, alkenyl, alkynyl or cycloalkyl, and their pharmaceutically acceptable salts and derivs. are described. These prodrugs are useful in the prevention and treatment of **Flaviviridae** infections, including **HCV** infection, and other related conditions. Compds. and compns. of the prodrugs of the present invention are described. Methods and uses are also provided that include the administration of an effective amount of the prodrugs of the present invention, or their pharmaceutically acceptable salts or derivs. These drugs may optionally be administered in combination or alteration with further anti-viral agents to prevent or treat **Flaviviridae** infections and other related conditions. Thus, antiviral activity of β-D-2'-C-methyl-7-methyl-6-phenyl-3,3a,5,8a-tetrahydro-1,3,4,5,7a-penta-aza-s-indacen-8-one is reported.

IT **640281-90-9P**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of modified and nucleoside prodrugs for treating **flaviviridae** infections)

IT **20724-73-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of modified and nucleoside prodrugs for treating **flaviviridae** infections)

L5 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 11 Jan 2004

ACCESSION NUMBER: 2004:20443 HCAPLUS
DOCUMENT NUMBER: 140:70984
TITLE: 2'-C-methyl-3'-O-L-valine ester ribofuranosyl cytidine for treatment of **flaviviridae** infections
INVENTOR(S): Sommadossi, Jean-Pierre; La Colla, Paolo
PATENT ASSIGNEE(S): Idenix (Cayman) Limited, Cayman I.; Universita Degli Studi di Cagliari
SOURCE: PCT Int. Appl., 110 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004002422	A2	20040108	WO 2003-US20431	20030627
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004077587	A1	20040422	US 2003-607909	20030627

PRIORITY APPLN. INFO.: US 2002-392351P P 20020628
US 2003-466194P P 20030428
US 2003-470949P P 20030514

OTHER SOURCE(S): MARPAT 140:70984

AB The 3'-L-valine ester of β-D-2'-C-methyl-ribofuranosyl cytidine provides superior results against **flaviviruses** and **pestiviruses**, including **hepatitis C** virus. Based on this discovery, compds., compns., methods and uses are provided for the treatment of **flaviviridae**, including **HCV**, that include the administration of an effective amount of val-mCyd or its salt, ester, prodrug or derivative, optionally in a pharmaceutically acceptable carrier. In an alternative embodiment, val-mCyd is used to treat any virus that replicates through an RNA-dependent RNA polymerase. Several examples are provided of the pharmacol., mechanism of action, metabolism, side effects, and clin. efficacy of the title compound

IT **640281-90-9D**, salts **640281-90-9D**, sulfonate salts
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ribofuranosylcytidine methylvaline ester combined with other antivirals for treatment of **flaviviridae** infections)

IT **640281-90-9P**
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ribofuranosylcytidine methylvaline ester for treatment of

flaviviridae infections)

IT **20724-73-6P 640725-70-8P 642075-42-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(ribofuranosylcytidine methylvaline ester for treatment of **flaviviridae** infections)

L5 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 01 Dec 2003
ACCESSION NUMBER: 2003:935820 HCAPLUS
DOCUMENT NUMBER: 140:156738
TITLE: Characterization of Resistance to Non-obligate Chain-terminating Ribonucleoside Analogs That Inhibit **Hepatitis C** Virus Replication in Vitro
AUTHOR(S): Migliaccio, Giovanni; Tomassini, Joanne E.; Carroll, Steven S.; Tomei, Licia; Altamura, Sergio; Bhat, Balkrishen; Bartholomew, Linda; Bosserman, Michele R.; Ceccacci, Alessandra; Colwell, Lawrence F.; Cortese, Riccardo; De Francesco, Raffaele; Eldrup, Anne B.; Getty, Krista L.; Hou, Xiaoli S.; LaFemina, Robert L.; Ludmerer, Steven W.; MacCoss, Malcolm; McMasters, Daniel R.; Stahlhut, Mark W.; Olsen, David B.; Hazuda, Daria J.; Flores, Osvaldo A.
CORPORATE SOURCE: Department of Biochemistry, Istituto di Ricerche di Biologia Molecolare P. Angeletti, Pomezia, 00040, Italy
SOURCE: Journal of Biological Chemistry (2003), 278(49), 49164-49170
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The urgent need for efficacious drugs to treat chronic **hepatitis C** virus (**HCV**) infection requires a concerted effort to develop inhibitors specific for virally encoded enzymes. We demonstrate that 2'-C-Me ribonucleosides are efficient chain-terminating inhibitors of **HCV** genome replication. Characterization of drug-resistant **HCV** replicons defined a single S282T mutation within the active site of the viral polymerase that conferred loss of sensitivity to structurally related compds. in both replicon and isolated polymerase assays. Biochem. analyses demonstrated that resistance at the level of the enzyme results from a combination of reduced affinity of the mutant polymerase for the drug and an increased ability to extend the incorporated nucleoside analog. Importantly, the combination of these agents with interferon-α results in synergistic inhibition of **HCV** genome replication in cell culture. Furthermore, 2'-C-methyl-substituted ribonucleosides also inhibited replication of genetically related viruses such as bovine diarrhea virus, **yellow fever**, and West African Nile viruses. These observations, together with the finding that 2'-C-methyl-guanosine in particular has a favorable pharmacol. profile, suggest that this class of

compds. may have broad utility in the treatment of **HCV** and other **flavivirus** infections.

IT **374750-30-8**
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(characterization of resistance to non-obligate chain-terminating ribonucleoside analogs that inhibit **hepatitis C** virus replication in vitro)

IT **15397-12-3**
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(characterization of resistance to non-obligate chain-terminating ribonucleoside analogs that inhibit **hepatitis C** virus replication in vitro)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

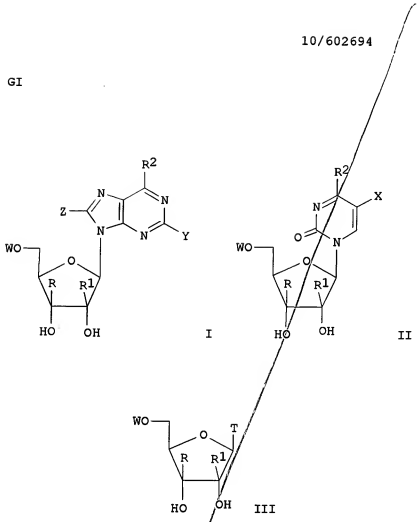
L5 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 14 Nov 2003
ACCESSION NUMBER: 2003:892793 HCAPLUS
DOCUMENT NUMBER: 139:365176
TITLE: Preparation of nucleoside derivatives for treating **hepatitis C** virus infection
INVENTOR(S): Roberts, Christopher Don; Dyatkina, Natalia B.; Keicher, Jesse D.; Liehr, Sebastian Johannes Reinhard; Hanson, Eric Jason
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., USA
SOURCE: PCT Int. Appl., 182 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003093290	A2	20031113	WO 2003-US14237	20030506
WO 2003093290	A3	20040318		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004063658	A1	20040401	US 2003-431631	20030506

PRIORITY APPLN. INFO.: US 2002-378624P P 20020506
US 2002-392871P P 20020628

OTHER SOURCE(S): MARPAT 139:365176

GI



AB Nucleosides I-III, wherein R and R1 are independently H, alkyl, alkenyl, alkynyl, provided that R and R1 are not both H; R2 is alkyl, cycloalkyl, alkenyl, alkynyl, acylamino, guanidino, amidino, thioacylamino, OH, alkoxy, halo, nitro, aryl, heteroaryl, substituted amine; W is H, phosphate, phosphonate, acyl, alkyl, sulfonate, lipid, amino acid, sugar residue, peptide, cholesterol; X is H, halo, alkyl, substituted amine; Y is H, halo, OH, alkylthio, substituted amine; Z is H, halo, OH, alkyl, substituted amine; T is nucleobase, were prepared as **HCV** RNA polymerase inhibitors and for treating **hepatitis C** virus infections. Thus, 2-(4-amino-pyrrolo[3,2-c]pyridin-1-yl)-5-hydroxymethyl-3-methyltetrahydro-furan-3,4-diol was prepared for treating **hepatitis C** virus infections (no data). Different kind of formulation such as tablet, capsule, suspension, injectable, and suppository formulation are reported.

IT **31448-54-1P 119410-84-3P 205171-06-8P**
374750-32-0P 444019-88-9P 565435-10-1P
565435-18-9P 565435-22-5P 565435-24-7P
622379-52-6P 622379-53-7P 622379-54-8P
622379-57-1P 622379-58-2P 622379-59-3P
622379-60-6P 622379-61-7P 622379-62-8P
622379-63-9P 622379-65-1P 622379-70-8P
622379-71-9P 622379-72-0P 622379-73-1P

622379-74-2P 622379-79-7P 622379-82-2P
622379-86-6P 622379-96-8P 622380-04-5P
622380-07-8P 622380-28-3P 622380-29-4P
622380-30-7P 622380-31-8P 622380-32-9P
622380-33-0P 622380-34-1P 622380-35-2P
622380-36-3P 622380-37-4P 622380-38-5P
622380-39-6P 622380-43-2P 622380-45-4P
622380-47-6P 622380-48-7P 622380-49-8P
622380-50-1P 622380-51-2P 622380-52-3P
622380-53-4P 622380-54-5P 622380-55-6P
622380-56-7P 622380-57-8P 622380-58-9P
622380-59-0P 622380-60-3P 622380-61-4P
622380-62-5P 622380-63-6P 622380-64-7P
622380-93-2P 622380-97-6P 622380-98-7P
622380-99-8P 622381-09-3P 622381-10-6P
622381-11-7P
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nucleoside derivs. for treating **hepatitis C** virus infection)

IT 172722-76-8P 622379-68-4P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of nucleoside derivs. for treating **hepatitis C** virus infection)

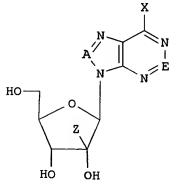
IT 15397-12-3 205171-05-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of nucleoside derivs. for treating **hepatitis C** virus infection)

L5 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 01 Aug 2003
ACCESSION NUMBER: 2003:591196 HCAPLUS
DOCUMENT NUMBER: 139:133790
TITLE: Preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents
INVENTOR(S): An, Haoyun; Ding, Yili; Shaw, Stephanie; Hong, Zhi
PATENT ASSIGNEE(S): Ribapharm Inc., USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003062256	A1	20030731	WO 2002-US34026	20021023
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE,				

SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU,
MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-350296P P 20020117
OTHER SOURCE(S): MARPAT 139:133790
GI



I

AB Various 2'-beta-methyl-6-substituted adenosine analogs I in which Z is selected from the group consisting of an alkyl, an O-alkyl, an alkenyl, an alkynyl, and CN, wherein the alkyl, the alkenyl, or the alkynyl is optionally substituted with a halogen or OH; A is CH or N, and E is C-R6 or N, such that (1) when A is CH then E is C-R6 or N, and (2) when A is N then E is CH; X is NR1R2, NR2NR3R4, NR2N=NR3, NR2N=CHR3, NR2N=O, NR2C(=O)NR3R4, NR2C(=S)NR3R4, NR2C(=NH)NR3R4, NR1C(=O)NR2NR3R4, NR2OR3, ONHC(O)O-alkyl, ONHC(O)O-aryl, ONR3R4, SNR1R2, SONR1R2, or S(O)2NR1R2; wherein R1-R4 are independently H, alkyl, substituted alkyl, O-alkyl, cyclic alkyl, heterocyclic alkyl, alkoxy, alkaryl, aryl, heterocyclic aryl, substituted aryl, acyl, substituted acyl, S(O)2-alkyl, NO, NH2, or OH; and R6 is H, NH2, halogen, N3, NHR1, NHCOR1 NR1R2, NHSO2R1, NHCONHR1, NHCSNHR1, CH2NHR1, CHR1NHR2, NHNH2, CN, alkyl, alkenyl, alkynyl, CH2-aryl, CH2-heterocycle, halogen, OH, or SH; are prepared by conventional and combinatorial library approaches. Contemplated compds. are particularly useful as therapeutic agents, and especially as antiviral agents. Thus, N6-[3-(methylthio)phenyl]-9H-(2'-β-C-methyl-β-D-ribofuranosyl)adenine was prepared and tested in vitro as antiviral agent against influenza virus A, **bovine viral diarrhea** virus, Hepatitis B virus, HIV-1 virus and human Rhinovirus.

IT **205171-05-7P**
RL: CPN (Combinatorial preparation); CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

IT **565435-03-2P 565435-04-3P 565435-05-4P**

565435-06-5P 565435-07-6P 565435-08-7P
565435-10-1P 565435-11-2P 565435-12-3P
565435-13-4P 565435-14-5P 565435-15-6P
565435-16-7P 565435-17-8P 565435-18-9P
565435-19-0P 565435-20-3P 565435-21-4P
565435-22-5P 565435-23-6P
RL: CPN (Combinatorial preparation); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)
(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

IT 565435-09-8 565435-24-7
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

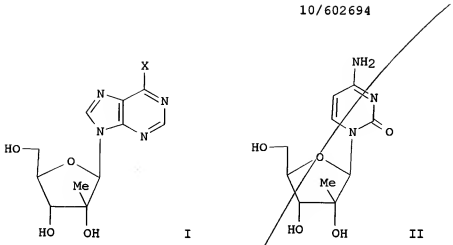
L5 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 01 Aug 2003
ACCESSION NUMBER: 2003:591195 HCAPLUS
DOCUMENT NUMBER: 139:133789
TITLE: Preparation of sugar modified nucleosides as antiviral agents
INVENTOR(S): Hong, Zhi; An, Haoyun; Ding, Yili; Girardet, Jean-luc; Zhong, Weidong
PATENT ASSIGNEE(S): Ribapharm Inc., USA
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003062255	A2	20030731	WO 2002-US31556	20021002

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-350296P P 20020117
US 2002-391800P P 20020626

OTHER SOURCE(S): MARPAT 139:133789
GI



I II

AB Various 2'-modified nucleoside analogs I and II wherein X is NH2, NHMe, NMe2, OMe, SMe, and corresponding prodrugs are provided, and particularly contemplated methods of use include use as antiviral agents, and especially as antiviral agents against **HCV**.

IT **15397-12-3P 172722-76-8P 565450-76-2P**
565450-77-3P 565450-78-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of sugar modified nucleosides as antiviral agents)

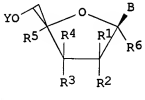
IT **20724-73-6 31448-54-1 119410-84-3**
565451-07-2 565451-08-3 565451-09-4
565451-10-7 565451-11-8
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of sugar modified nucleosides as antiviral agents)

L5 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 26 Jul 2002
ACCESSION NUMBER: 2002:555629 HCAPLUS
DOCUMENT NUMBER: 137:125359
TITLE: Preparation of nucleoside derivatives as inhibitors of RNA-dependent RNA viral polymerase
INVENTOR(S): Carroll, Steven S.; Lafemina, Robert L.; Hall, Dawn L.; Himmelberger, Amy L.; Kuo, Lawrence C.; Maccoss, Malcolm; Olsen, David B.; Rutkowski, Carrie A.; Tomassini, Joanne E.; An, Haoyun; Bhat, Balkrishen; Bhat, Neelima; Cook, Phillip Dan; Eldrup, Anne B.; Guinosso, Charles J.; Prhavc, Marija; Prakash, Thazha P.
PATENT ASSIGNEE(S): Merck & Co., Inc., USA; Isis Pharmaceuticals, Inc.
SOURCE: PCT Int. Appl., 235 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2002057425	A2	20020725	WO 2002-US1531	20020118	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
US 2002147160	A1	20021010	US 2002-52318	20020118	
US 2004072788	A1	20040415	US 2003-431657	20030507	
US 2004067901	A1	20040408	US 2003-688691	20031017	
PRIORITY APPLN. INFO.:			US 2001-263313P	P	20010122
			US 2001-282069P	P	20010406
			US 2001-299320P	P	20010619
			US 2001-344528P	P	20011025
			US 2002-52318	A3	20020118

OTHER SOURCE(S): MARPAT 137:125359
GI



I

AB The present invention provides the preparation of nucleoside compds. I, wherein B is nucleobase, Y is H, alkylcarbonyl, phosphate; R1 is H, alkenyl, alkynyl, alkyl; R2 and R3 are independently H, OH, halogen, alkyl, alkoxy, alkenyloxy, alkylthio, alkylcarbonyloxy, aryloxycrbonyl, azido, amino, alkylamino; R1 and R2 together with the carbon atom to which they are attached form a 3- to 6-membered heterocycle; R4 is H, OH, SH, NH2, alkylamino, cycloalkylamino, halogen, alkyl, alkoxy, CF3; R5 and R6 are independently H, hydroxymethyl, Me, fluoromethyl; and certain derivs. thereof which are inhibitors of RNA-dependent RNA viral polymerase. These compds. are inhibitors of RNA-dependent RNA viral replication and are useful for the treatment of RNA-dependent RNA viral infection. They are particularly useful as inhibitors of **hepatitis C** virus (**HCV**) NS5B polymerase, as inhibitors of **HCV** replication, and/or for the treatment of **hepatitis C** infection. The invention also describes pharmaceutical compns. containing such nucleoside compds. alone or in combination with other agents active against RNA-dependent RNA viral infection, in particular **HCV** infection. Also disclosed are methods of inhibiting RNA-dependent RNA polymerase, inhibiting RNA-dependent

RNA viral replication, and/or treating RNA-dependent RNA viral infection with the nucleoside compds. of the present invention. Thus, 4-amino-1-(2-C-methyl-β-D-ribofuranosyl)-1H-pyrazolo[3,4-d]pyrimidine was prepared as inhibitors of RNA-dependent RNA viral polymerase. Representative compds. tested in the **HCV** NS5B polymerase assay exhibited IC's less than 100 μM. The compds. of the present invention were also evaluated for their ability to affect the replication of **Hepatitis** C Virus RNA in cultured hepatoma (HuH-7) cells containing a sub-genomic **HCV** Replicon.

IT **20724-73-6P 114262-49-6P 444019-87-8P 444019-99-2P**
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT **444019-88-9P**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT **15397-12-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

L5 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 07 Dec 2001
ACCESSION NUMBER: 2001:886155 HCAPLUS
DOCUMENT NUMBER: 136:590
TITLE: Methods and compositions using modified nucleosides for treating **flaviviruses** and **pestiviruses**
INVENTOR(S): Sommadossi, Jean-Pierre; Lacolla, Paolo
PATENT ASSIGNEE(S): Novirio Pharmaceuticals Limited, Cayman I.; Universita Degli Studi Di Cagliari
SOURCE: PCT Int. Appl., 302 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001092282	A2	20011206	WO 2001-US16687	20010523
WO 2001092282	A3	20020502		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,

CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1294735	A2	20030326	EP 2001-952131	20010523		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR						
US 2003060400	A1	20030327	US 2001-863816	20010523		
JP 2004510698	T2	20040408	JP 2002-500895	20010523		
NO 2002005600	A	20030117	NO 2002-5600	20021121		
US 2004063622	A1	20040401	US 2003-602693	20030620		
US 2004097462	A1	20040520	US 2003-602692	20030620		
PRIORITY APPLN. INFO.:			US 2000-207674P	P	20000526	
			US 2001-283276P	P	20010411	
			US 2001-863816	A3	20010523	
			WO 2001-US16687	W	20010523	

OTHER SOURCE(S): MARPAT 136:590

AB A method and composition are provided for treating a host infected with **flavivirus** or **pestivirus**, comprising administering an effective amount of a 1', 2' or 3'-modified nucleoside or a pharmaceutically acceptable salt or prodrug thereof.

IT **15397-12-3 20724-73-6 31448-54-1 119410-84-3 374750-30-8 374750-32-0**
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside derivs. for treating **flaviviruses** and **pestiviruses**)

L5 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 30 Nov 2001
ACCESSION NUMBER: 2001:868467 HCAPLUS
DOCUMENT NUMBER: 136:6296
TITLE: Preparation of antiviral nucleosides and methods for treating **hepatitis C** virus
INVENTOR(S): Sommadossi, Jean-Pierre; Lacolla, Paulo
PATENT ASSIGNEE(S): Novirio Pharmaceuticals Limited, Cayman I.; Universita degli Studi di Cagliari
SOURCE: PCT Int. Appl., 296 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001090121	A2	20011129	WO 2001-US16671	20010523
WO 2001090121	A3	20020502		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001074906	A5	20011203	AU 2001-74906		20010523
US 2003050229	A1	20030313	US 2001-864078		20010523
EP 1292603	A2	20030319	EP 2001-941564		20010523
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
BR 2001011127	A	20030624	BR 2001-11127		20010523
NO 2002005627	A	20030106	NO 2002-5627		20021122
US 2004097461	A1	20040520	US 2003-602691		20030620
PRIORITY APPLN. INFO.:			US 2000-206585P	P	20000523
			US 2001-864078	A1	20010523
			WO 2001-US16671	W	20010523

OTHER SOURCE(S): MARPAT 136:6296

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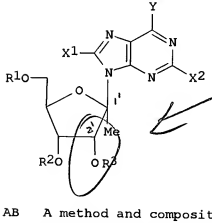


I

AB A method and composition for treating a host infected with **hepatitis C** comprising administering an effective **hepatitis C** treatment amount of a described 1'-, 2'- or 3'-modified nucleosides I, wherein : R1-R3 and R are independently H, phosphate (including mono, di- or triphosphate and a stabilized phosphate prodrug); acyl; alkyl; sulfonate ester including alkyl or arylalkyl sulfonyl including methanesulfonyl and benzyl, wherein the Ph group is optionally substituted with one or more substituents as described in the definition of aryl given herein; a lipid, including a phospholipid; an amino acid; a carbohydrate; a peptide; a cholesterol; or other pharmaceutically acceptable leaving group which when administered in vivo is capable of providing a compound wherein R1-R3 are independently H or phosphate; Y is hydrogen, bromo, chloro, fluoro, iodo, OR4, NR4R5 or SR4; X1 and X2 are independently selected from the group consisting of H, straight chained, branched or cyclic alkyl, CO-alkyl, CO-aryl, CO-alkoxyalkyl, chloro, bromo, fluoro, iodo, OR4, NR4R5 or SR4; and R4 and R5 are independently hydrogen, acyl, alkyl.or a pharmaceutically acceptable salt or prodrug thereof, is provided. Thus, I (R1-R3 = X1 = X2 = H, Y = NH2) was prepared and tested in

Cynomolgus monkeys as antiviral agent. Oral bioavailability in monkeys, bone human bone marrow toxicity (IC50 > 10 μM), and mitochondrial toxicity, were reported .

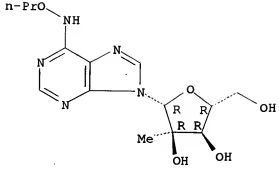
IT **15397-12-3P 20724-73-6P 31448-54-1P**
119410-84-3P 374750-30-8P 374750-32-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antiviral nucleosides and methods for treating **hepatitis C** virus)

FILE 'REGISTRY' ENTERED AT 11:54:14 ON 24 MAY 2004

L6 130 SEA FILE=REGISTRY ABB=ON PLU=ON (15397-12-3/BI OR 20724-73-6/BI OR 31448-54-1/BI OR 119410-84-3/BI OR 205171-05-7/BI OR 374750-30-8/BI OR 374750-32-0/BI OR 640281-90-9/BI OR 565435-18-9/BI OR 565435-24-7/BI OR 172722-76-8/BI OR 444019-88-9/BI OR 565435-10-1/BI OR 565435-22-5/BI OR 565450-78-4/BI OR 622379-57-1/BI OR 622379-58-2/BI OR 622379-59-3/BI OR 622379-62-8/BI OR 622379-63-9/BI OR 622379-74-2/BI OR 622380-50-1/BI OR 622381-09-3/BI OR 640725-70-8/BI OR 640725-74-2/BI OR 114262-49-6/BI OR 205171-06-8/BI OR 444019-87-8/BI OR 444019-99-2/BI OR 454423-92-8/BI OR 565435-03-2/BI OR 565435-04-3/BI OR 565435-05-4/BI OR 565435-06-5/BI OR 565435-07-6/BI OR 565435-08-7/BI OR 565435-09-8/BI OR 565435-11-2/BI OR 565435-12-3/BI OR 565435-13-4/BI OR 565435-14-5/BI OR 565435-15-6/BI OR 565435-16-7/BI OR 565435-17-8/BI OR 565435-19-0/BI OR 565435-20-3/BI OR 565435-21-4/BI OR 565435-23-6/BI OR 565450-76-2/BI OR 565450-77-3/BI OR 565451-07-2/BI OR 565451-08-3/BI OR 565451-09-4/BI OR 565451-10-7/BI OR 565451-11-8/BI OR 622379-52-6/BI OR 622379-53-7/BI OR 622379-54-8/BI OR 622379-60-6/BI OR 622379-61-7/BI OR 622379-65-1/BI OR 622379-68-4/BI OR 622379-70-8/BI OR 622379-71-9/BI OR 622379-72-0/BI OR 622379-73-1/BI OR 622379-79-7/BI OR 622379-82-2/BI OR 622379-86-6/BI OR 622379-96-8/BI OR 622380-04-5/BI OR 622380-07-8/BI OR 622380-28-3/BI OR 622380-29-4/BI OR 622380-30-7/BI OR 622380-31-8/BI OR 622380-32-9/BI OR 622380-33-0/BI OR 622380-34-1/BI OR 622380-35-2/BI OR 622380-36-3/BI OR 622380-37-4/BI OR 622380-38-5/BI OR 622380-39-6/BI OR 622380-43-2/BI OR 622380-45-4/BI OR 622380-47-6/BI OR 622380-48-7/BI OR 622380-49-8/BI OR 622380-51-2/BI OR 622380-52-3/BI OR 622380-53-4/BI OR 622380-54-5/BI OR 622380-55-6/BI OR 622380-56-7/BI OR 622380-57-8/BI OR 622380-58-9/BI OR 622380-59-0/BI OR 622380-60-3/BI OR 622380

L6 ANSWER 1 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **677299-18-2** REGISTRY
CN Inosine, 2'-C-methyl-, O-propyloxime (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C14 H21 N5 O5
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); USES (Uses)

Absolute stereochemistry.

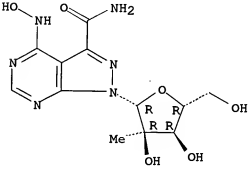


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 7 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **677298-99-6** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4-(hydroxyamino)-1-(2-C-methyl-β-D-ribofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H16 N6 O6
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



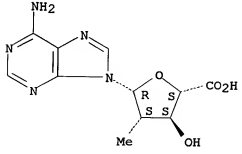
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 15 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN

RN **654075-09-9** REGISTRY
CN β-D-Arabinofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1,2-dideoxy-2-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H13 N5 O4
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

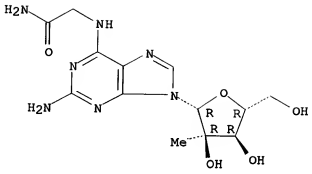


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 17 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **641571-40-6** REGISTRY
CN Adenosine, 2-amino-N-(2-amino-2-oxoethyl)-2'-C-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H19 N7 O5
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

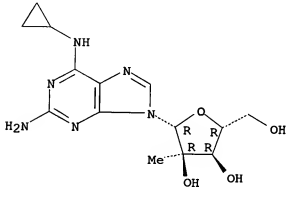


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 20 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **640725-77-5** REGISTRY
CN Adenosine, 2-amino-N-cyclopropyl-2'-C-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C14 H20 N6 O4
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); USES (Uses)

Absolute stereochemistry.



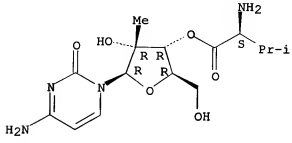
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 24 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **640281-90-9** REGISTRY

CN L-Valine, 3'-ester with 2'-C-methylcytidine (9CI) (CA INDEX NAME)
FS STEREOSEARCH
DR 642075-49-8
MF C15 H24 N4 O6
CI COM
SR CA
LC STN Files: CA, CAPLUS, PROUSDDR, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); USES (Uses)

Absolute stereochemistry.

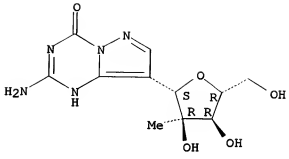


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 28 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **622380-99-8** REGISTRY
CN Pyrazolo[1,5-a]-1,3,5-triazin-4(1H)-one, 2-amino-8-(2-C-methyl-β-D-ribofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H15 N5 O5
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

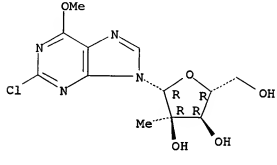


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 66 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **622379-96-8** REGISTRY
CN Inosine, 2-chloro-2'-C-methyl-6-O-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H15 Cl N4 O5
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



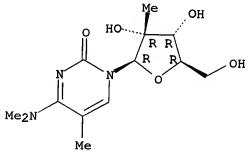
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 87 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **565451-11-8** REGISTRY
CN Cytidine, N,N,5-trimethyl-2'-C-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH

MF C13 H21 N3 O5
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); USES (Uses)

Absolute stereochemistry.

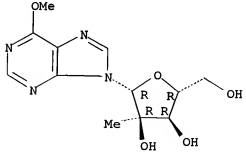


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 92 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **565450-78-4** REGISTRY
CN Inosine, 2'-C-methyl-6-O-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H16 N4 O5
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

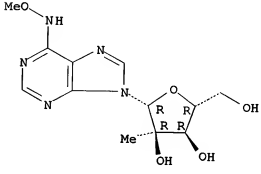


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 95 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **565435-24-7** REGISTRY
CN Inosine, 2'-C-methyl-, O-methyloxime (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H17 N5 O5
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

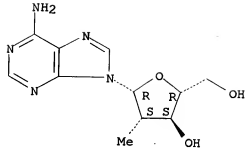


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 117 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **454423-92-8** REGISTRY
CN 9H-Purin-6-amine, 9-(2-deoxy-2-methyl-β-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H15 N5 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.

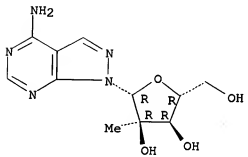


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 118 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **444019-99-2** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine, 1-(2-C-methyl-β-D-ribofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H15 N5 O4
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



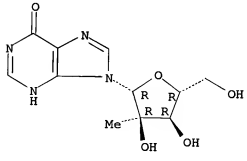
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 121 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **374750-32-0** REGISTRY
CN Inosine, 2'-C-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH

MF C11 H14 N4 O5
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

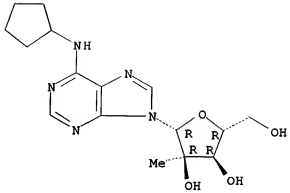


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 123 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **205171-06-8** REGISTRY
CN Adenosine, N-cyclopentyl-2'-C-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H23 N5 O4
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Absolute stereochemistry.

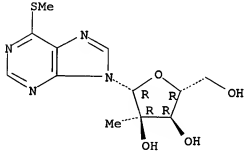


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 125 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **172722-76-8** REGISTRY
CN Inosine, 2'-C-methyl-6-S-methyl-6-thio- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H16 N4 O4 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.



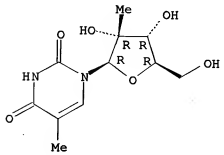
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 126 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN

RN **119410-84-3** REGISTRY
CN Uridine, 5-methyl-2'-C-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H16 N2 O6
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties)

Absolute stereochemistry.

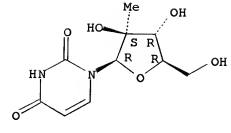


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 127 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **114262-49-6** REGISTRY
CN 2,4(1H,3H)-Pyrimidinedione, 1-(2-C-methyl-β-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C10 H14 N2 O6
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

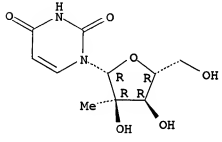


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 128 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **31448-54-1** REGISTRY
CN Uridine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2'-C-Methyluridine
FS STEREOSEARCH
MF C10 H14 N2 O6
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent)

Absolute stereochemistry.



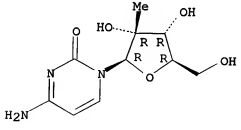
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

21 REFERENCES IN FILE CA (1907 TO DATE)
21 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 129 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **20724-73-6** REGISTRY
CN Cytidine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

FS STEREOSEARCH
MF C10 H15 N3 O5
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

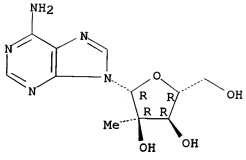


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1907 TO DATE)
15 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 130 OF 130 REGISTRY COPYRIGHT 2004 ACS on STN
RN **15397-12-3** REGISTRY
CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2'-C-Methyladenosine
FS STEREOSEARCH
MF C11 H15 N5 O4
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



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23 REFERENCES IN FILE CA (1907 TO DATE)
23 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Searcher : Shears 571-272-2528

FILE 'CAOLD' ENTERED AT 11:54:42 ON 24 MAY 2004
L7 0 S L6

FILE 'USPATFULL' ENTERED AT 11:54:47 ON 24 MAY 2004
L8 7 S L6

L8 ANSWER 1 OF 7 USPATFULL on STN
ACCESSION NUMBER: 2004:101717 USPATFULL
TITLE: 2'-C-methyl-3'-O-L-valine ester ribofuranosyl cytidine for treatment of flaviviridae infections
INVENTOR(S): Sommadossi, Jean-Pierre, Cambridge, MA, UNITED STATES
LaColla, Paola, Cagliari, ITALY

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004077587	A1	20040422
APPLICATION INFO.:	US 2003-607909	A1	20030627 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-392351P	20020628 (60)
	US 2003-466194P	20030428 (60)
	US 2003-470949P	20030514 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: KING & SPALDING, 191 PEACHTREE STREET, N.E., ATLANTA, GA, 30303-1763
NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 3396
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The 3'-L-valine ester of β-D-2'-C-methyl-ribofuranosyl cytidine provides superior results against flaviviruses and pestiviruses, including hepatitis C virus. Based on this discovery, compounds, compositions, methods and uses are provided for the treatment of flaviviridae, including HCV, that include the administration of an effective amount of val-mCyd or its salt, ester, prodrug or derivative, optionally in a pharmaceutically acceptable carrier. In an alternative embodiment, val-mCyd is used to treat any virus that replicates through an RNA-dependent RNA polymerase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 2 OF 7 USPATFULL on STN
ACCESSION NUMBER: 2004:83202 USPATFULL
TITLE: Nucleoside derivatives for treating hepatitis C virus infection
INVENTOR(S): Roberts, Christopher Don, Belmont, CA, UNITED STATES
Dyatkina, Natalia B., Mountain View, CA, UNITED STATES
Keicher, Jesse D., Menlo Park, CA, UNITED STATES
Liehr, Sebastian Johannes Reinhard, East Palo

Alto, CA, UNITED STATES
Hanson, Eric Jason, San Francisco, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004063658	A1	20040401
APPLICATION INFO.:	US 2003-431631	A1	20030506 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-378624P	20020506 (60)
	US 2002-392871P	20020628 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BURNS, DOANE, SWECKER & MATHIS, L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
LINE COUNT: 4827
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are compounds, compositions and methods for treating hepatitis C virus infections.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 3 OF 7 USPATFULL on STN
ACCESSION NUMBER: 2004:83166 USPATFULL
TITLE: Methods and compositions for treating flaviviruses and pestiviruses
INVENTOR(S): Sommadossi, Jean-Pierre, Birmingham, AL, UNITED STATES
LaColla, Paulo, Cagliari, ITALY

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004063622	A1	20040401
APPLICATION INFO.:	US 2003-602693	A1	20030620 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2001-863816, filed on 23 May 2001, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-207674P	20000526 (60)
	US 2001-283276P	20010411 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Sherry M. Knowles, KING & SPALDING LLP, 45th Floor, 191 Peachtree Street, N.E., Atlanta, GA, 30303
NUMBER OF CLAIMS: 129
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 8467
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method and composition for treating a host infected with

flavivirus or pestivirus comprising administering an effective flavivirus or pestivirus treatment amount of a described 1', 2' or 3'-modified nucleoside or a pharmaceutically acceptable salt or prodrug thereof, is provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 4 OF 7 USPATFULL on STN
ACCESSION NUMBER: 2004:31779 USPATFULL
TITLE: Antiviral phosphonate compounds and methods therefor
INVENTOR(S): Hong, Zhi, Aliso Viejo, CA, UNITED STATES
Koh, Yung-hyo, Irvine, CA, UNITED STATES
Shim, Jae Hoon, Irvine, CA, UNITED STATES
Girardet, Jean-Luc, Aliso Viejo, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004023921	A1	20040205
APPLICATION INFO.:	US 2003-426507	A1	20030429 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-377024P	20020430 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ROBERT D. FISH, RUTAN & TUCKER, LLP, P.O. BOX 1950, 611 ANTON BLVD., 14TH FLOOR, COSTA MESA, CA, 92628-1950
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 1585
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Pharmaceutical compositions comprise a nucleotide analog with a phosphonate group at a concentration effective to act as a substrate and/or inhibitor of a viral polymerase, and especially of the HCV RNA dependent RNA polymerase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 5 OF 7 USPATFULL on STN
ACCESSION NUMBER: 2004:18806 USPATFULL
TITLE: Oligonucleotides having modified nucleoside units
INVENTOR(S): Eldrup, Anne B., Encinitas, CA, UNITED STATES
Cook, Phillip Dan, Fallbrook, CA, UNITED STATES
Parshall, B. Lynne, Carlsbad, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004014108	A1	20040122
APPLICATION INFO.:	US 2003-444298	A1	20030523 (10)

	NUMBER	DATE

PRIORITY INFORMATION: US 2002-383358P 20020524 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: WOODCOCK WASHBURN LLP, ONE LIBERTY PLACE - 46TH FLOOR, PHILADELPHIA, PA, 19103
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
LINE COUNT: 5346
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are oligonucleotide that include one or more modified nucleoside units. The oligonucleotides are particularly useful as antisense agents, ribozymes, aptamer, siRNA agents, probes and primers or, when hybridized to an RNA, as a substrate for RNA cleaving enzymes including RNase H and dsRNase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 6 OF 7 USPATFULL on STN
ACCESSION NUMBER: 2003:86792 USPATFULL
TITLE: Methods and compositions for treating flaviviruses and pestiviruses
INVENTOR(S): LaColla, Paulo, Cagliari, ITALY
Sommadossi, Jean-Pierre, Birmingham, AL, UNITED STATES

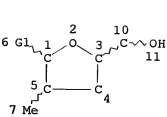
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003060400	A1	20030327
APPLICATION INFO.:	US 2001-863816	A1	20010523 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-207674P	20000526 (60)
	US 2001-283276P	20010411 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: KING & SPALDING, 191 PEACHTREE STREET, N.E., ATLANTA, GA, 30303-1763
NUMBER OF CLAIMS: 129
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 8330
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method and composition for treating a host infected with flavivirus or pestivirus comprising administering an effective flavivirus or pestivirus treatment amount of a described 1', 2' or 3'-modified nucleoside or a pharmaceutically acceptable salt or prodrug thereof, is provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

(FILE 'MARPAT' ENTERED AT 11:55:08 ON 24 MAY 2004)
L9 STR



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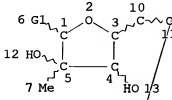
MLEVEL IS CLASS AT 7 8 9
GGCAT IS PCY AT 9
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS E4 C E2 N AT 8
ECOUNT IS E5 C E4 N AT 9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME:
ECLEVEL IS LIM ON ALL NODES
ALL RING(S) ARE ISOLATED

L11 112 SEA FILE=MARPAT SSS FUL L9 (MODIFIED ATTRIBUTES)
L12 STR



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DEFAULT MLEVEL IS ATOM
MLEVEL IS CLASS AT 7 8 9
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ECOUNT IS E4 C E2 N AT 8
ECOUNT IS E5 C E4 N AT 9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME:
ECLEVEL IS LIM ON ALL NODES
ALL RING(S) ARE ISOLATED

L13 28 SEA FILE=MARPAT SUB=L11 SSS FUL L12 (MODIFIED ATTRIBUTES)

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SEARCH TIME: 00.00.02

L13 ANSWER 1 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 140:327061 MARPAT
TITLE: Nucleoside derivatives for treating hepatitis C virus infection
INVENTOR(S): Roberts, Christopher Don; Dyatkina, Natalia B.
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., USA
SOURCE: PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004028481	A2	20040408	WO 2003-US31433	20030930

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-415222P 20020930
US 2003-443169P 20030129

AB Nucleoside compns. and methods for treating hepatitis C virus infections. Thus, 9-(2'-C-methyl-β-D-ribofuranosyl)-6-methoxyaminopurine was prepared by the reaction of 6-chloro-9-(2'-C-methyl-β-D-ribofuranosyl)purine and methxylamine. This compound exhibited anti-hepatitis C activity by inhibiting HCV polymerase.

IC ICM A61K

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 33

ST hepatitis C virus infection nucleoside prepn

IT Drug delivery systems
(capsules; nucleoside derivs. for treating hepatitis C virus infection)

IT Nucleosides, biological studies
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(derivs.; nucleoside derivs. for treating hepatitis C virus infection)

IT Drug delivery systems
(injections; nucleoside derivs. for treating hepatitis C virus infection)

IT Antiviral agents
Hepatitis C virus
(nucleoside derivs. for treating hepatitis C virus infection)

IT Drug delivery systems
(suppositories; nucleoside derivs. for treating hepatitis C virus infection)

IT Drug delivery systems
(suspensions; nucleoside derivs. for treating hepatitis C virus infection)

IT Drug delivery systems
(tablets; nucleoside derivs. for treating hepatitis C virus infection)

IT 565435-18-9P 677298-62-3P 677299-04-6P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(nucleoside derivs. for treating hepatitis C virus infection)

IT 36832-05-0P 565435-24-7P 565455-26-7P 677298-71-4P
677298-74-7P 677298-75-8P 677298-77-0P 677298-83-8P
677298-84-9P 677298-85-0P 677298-86-1P 677298-88-3P
677298-90-7P 677298-92-9P 677298-93-0P 677298-94-1P
677298-95-2P 677298-96-3P 677298-97-4P 677298-98-5P
677298-99-6P 677299-00-2P 677299-01-3P 677299-02-4P
677299-03-5P 677299-07-9P 677299-11-5P 677299-12-6P
677299-15-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleoside derivs. for treating hepatitis C virus infection)

IT 22886-45-9 622379-57-1 622379-58-2 622379-59-3 622379-62-8
622379-63-9 622379-74-2 622380-50-1 622380-70-5 622380-75-0
622380-78-3 677299-18-2
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside derivs. for treating hepatitis C virus infection)

IT 87-42-3, 6-Chloropurine 512-56-1 5399-87-1 7803-49-8, Hydroxylamine, reactions 22737-36-6, O-Trimethylsilyl hydroxylamine 443642-33-9 622379-95-7 677298-79-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(nucleoside derivs. for treating hepatitis C virus infection)

IT 5399-92-8P 24385-15-7P 52443-16-0P 55673-61-5P 123148-78-7P
205171-05-7P 636581-80-1P 636581-81-2P 636581-82-3P
677298-64-5P 677298-68-9P 677298-81-6P 677298-87-2P
677298-89-4P 677298-91-8P 677299-05-7P 677299-06-8P
677299-08-0P 677299-09-1P 677299-10-4P 677299-13-7P
677299-14-8P 677299-16-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleoside derivs. for treating hepatitis C virus infection)

IT 679391-19-6 679391-20-9
RL: PRP (Properties)

(unclaimed DNA; nucleoside derivs. for treating hepatitis C virus infection)

L13 ANSWER 2 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 140:87662 MARPAT
TITLE: 2'- and 3'-nucleoside prodrugs for treating Flaviviridae infections
INVENTOR(S): Sommadossi, Jean-pierre; La Colla, Paolo; Storer, Richard; Gosselin, Gilles
PATENT ASSIGNEE(S): Idenix (Cayman) Limited, Cayman I.; Centre National de la Recherche Scientifique; Universita Degli Studi di Cagliari
SOURCE: PCT Int. Appl., 2498 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003000	A2	20040108	WO 2003-IB3901	20030627

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:
US 2002-392350P 20020628
US 2002-392351P 20020628
US 2003-466194P 20030428
US 2003-470949P 20030514

AB 2' And 3'-Prodrugs of 1'-, 2'-, 3'-, or 4'-branched β-D or β-L nucleosides, or their pharmaceutically acceptable salts and derivs., are described which are useful in the prevention and treatment of Flaviviridae infections and other related conditions. These modified nucleosides provide superior results against flaviviruses and pestiviruses, including hepatitis C virus and viruses generally that replicate through an RNA-dependent RNA reverse transcriptase. Compds., compns., methods and uses are provided for the treatment of Flaviviridae infection, including HCV infection, that include the administration of an effective amount of the prodrugs of the invention, or their pharmaceutically acceptable salts or derivs. These drugs may optionally be administered in combination or alternation with further antiviral agents to prevent or treat Flaviviridae infections and other related conditions. Preparation of compds. of the invention is included.

IC ICM C07H019-00
CC 1-5 (Pharmacology)
Section cross-reference(s): 33, 63
ST nucleoside prodrug prepn Flaviviridae infection treatment; hepatitis

C virus infection treatment nucleoside prodrug

IT Punta Toro virus
(A; nucleoside prodrugs for treating Flaviviridae infections)

IT Genetic element
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IRES (internal ribosomal entry site) element, IRES-dependent translation inhibitors; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Cytomegalovirus
(MCMV; nucleoside prodrugs for treating Flaviviridae infections)

IT Enzymes, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(RNA helicase, inhibitors; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Rous sarcoma virus
(RSV type A; nucleoside prodrugs for treating Flaviviridae infections)

IT Nucleotides, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(analogs; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Phosphorothioate oligonucleotides
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antisense; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Drug resistance
(antiviral; nucleoside prodrugs for treating Flaviviridae infections)

IT Drug delivery systems
(capsules; nucleoside prodrugs for treating Flaviviridae infections)

IT Polyoxyalkylenes, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates with interferon α2a; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Drug delivery systems
(inhalants; nucleoside prodrugs for treating Flaviviridae infections)

IT Drug delivery systems
(injections, i.v.; nucleoside prodrugs for treating Flaviviridae infections)

IT Antiviral agents
Bovine diarrhea virus
Dengue virus 2
Dengue virus 4
Drug delivery systems
Flaviviridae
Hepatitis C virus
Human
Human adenovirus 1
Human coxsackievirus B2
Human coxsackievirus B3
Human coxsackievirus B4

Human coxsackievirus B9
Human herpesvirus 1
Human herpesvirus 2
Human herpesvirus 3
Human herpesvirus 4
Human herpesvirus 5
Human parainfluenza virus 3
Human poliovirus 1
Human rhinovirus 14
Human rhinovirus 2
Human rhinovirus 5
Influenza A virus
Influenza B virus
Reoviridae
Venezuelan equine encephalitis virus
West Nile virus
Yellow fever virus
dsRNA viruses
(nucleoside prodrugs for treating Flaviviridae infections)

IT Nucleoside analogs
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside prodrugs for treating Flaviviridae infections)

IT Pharmacokinetics
(nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
Interleukins
Ribozymes
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Drug delivery systems
(oral; nucleoside prodrugs for treating Flaviviridae infections)

IT Drug delivery systems
(parenteral; nucleoside prodrugs for treating Flaviviridae infections)

IT Antisense oligonucleotides
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phosphorothioate; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Drug delivery systems
(prodrugs; nucleoside prodrugs for treating Flaviviridae infections)

IT Antiviral agents
(resistance to; nucleoside prodrugs for treating Flaviviridae infections)

IT Drug interactions
(synergistic; nucleoside prodrugs for treating Flaviviridae infections)

IT Drug delivery systems
(tablets; nucleoside prodrugs for treating Flaviviridae infections)

IT Drug delivery systems

(unit doses; nucleoside prodrugs for treating Flaviviridae infections)

IT Infection
(viral; nucleoside prodrugs for treating Flaviviridae infections)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(τ; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α-2a, PEGylated; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α-2b; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(αcon-1; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β1, β1a; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(γ, γ1b; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(γ; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(δ; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ω; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT 9026-28-2
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(NS5B; nucleoside prodrugs for treating Flaviviridae infections)

IT 33985-40-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(de prodrugs for treating Flaviviridae infections)

IT 37353-41-6, Cysteine protease 149885-80-3, NS3 protease 433935-36-5, Polymerase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)

IT 20724-73-6P
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 125911-78-6 243664-63-3, DNA polymerase β 386213-38-3
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 125911-76-4 150993-73-0 640725-72-0
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); BIOL (Biological study)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 374750-28-4
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PKT (Pharmacokinetics); BIOL (Biological study)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 640725-71-9P
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 2096-10-8 15397-12-3 31448-54-1 188413-99-2 374750-30-8 640725-73-1 640725-74-2 640725-75-3 640725-76-4 640725-77-5
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 50-69-1, D-Ribose 57-48-7, D-Fructose, reactions 65-71-4, Thymine 66-22-8, Uracil, reactions 71-30-7, Cytosine 77-76-9, 2,2-Dimethoxypropane 98-88-4, Benzoyl chloride 108-24-7, Acetic anhydride 13734-41-3 40615-36-9 185610-53-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 492-30-8P 4099-85-8P 7392-74-7P 30361-17-2P 30361-19-4P 55797-67-6P 152540-75-5P 327614-69-7P 327614-72-2P 503543-43-9P 503543-44-0P 503543-45-1P 503543-46-2P 503543-47-3P 503543-49-5P 503543-50-8P 503543-51-9P 503543-55-3P 503806-04-0P 640725-69-5P 640725-70-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 152540-76-6P 153186-26-6P 153186-32-4P 503543-48-4P 503543-52-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(nucleoside prodrugs for treating Flaviviridae infections)

IT 58-96-8, Uridine 65-46-3, Cytidine 951-77-9, Deoxycytidine
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)
IT 67-99-2, Gliotoxin 84-11-7D, Phenanthrenequinone, derivs. 93-98-1D, Benzanilide, derivs. 504-78-9D, Thiazolidine, derivs. 17397-89-6, Cerulenin 25322-68-3D, Polyethylene glycol, conjugates with interferon α2a 36791-04-5, Ribavirin 98530-12-2, IntronA 205171-05-7 374750-32-0 443642-29-3 472960-22-8, Albuferon 565450-78-4 622381-09-3
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside prodrugs for treating Flaviviridae infections, and use with other agents)
IT 645004-11-1 645004-12-2 645004-13-3 645004-14-4 645004-15-5 645004-16-6
RL: PRP (Properties)
(unclaimed sequence; 2'- and 3'-nucleoside prodrugs for treating Flaviviridae infections)
IT 9012-90-2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α and γ; nucleoside prodrugs for treating Flaviviridae infections)

L13 ANSWER 3 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 140:77365 MARPAT
TITLE: Preparation of modified 2'- and 3'-nucleoside prodrugs for treating Flaviviridae infections
INVENTOR(S): Sommadossi, Jean-pierre; La Colla, Poalo; Storer, Richard; Gosselin, Gilles
PATENT ASSIGNEE(S): Idenix (Cayman) Limited, Cayman I.; Universita degli studi di Cagliari; Centre National de la Recherche Scientifique
SOURCE: PCT Int. Appl., 201 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004002999	A2	20040108	WO 2003-IB3246	20030627
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: US 2002-392350P 20020628
US 2002-392351P 20020628

Searcher : Shears 571-272-2528

US 2003-466194P 20030428
US 2003-470949P 20030514

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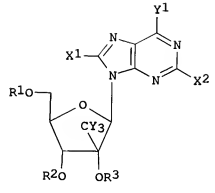

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AB 2' And/or 3' prodrugs of 1', 2', 3' or 4'-branched-nucleosides I, wherein R1-R3 are independently H, phosphate, alkyl, acyl, CO-alkyl, CO-aryl, CO-alkoxyalkyl, CO-aryloxyalkyl, CO-substituted aryl, sulfonate ester, benzyl, wherein the Ph group is optionally substituted with one or more substituents, alkylsulfonyl, arylsulfonyl, aralkylsulfonyl, lipid, amino acid, carbohydrate, peptide, cholesterol; Y1 is hydrogen, bromo, chloro, fluoro, iodo, CN, OH, OR4, NH2, NHR4, NR4R5, SH or SR4; X1 and X2 are independently alkyl, CH3, CF3, CY3, 2-Br-Et, CH2F, CH2Cl, CH2CF3, CF2CF3, CY2CY3, CH2OH, alkenyl, alkynyl, COOH, COOR4, COO-alkyl, COO-aryl, CO-O-alkoxyalkyl, CONH2, CONHR4, CON(R4)2, halo, CN, N3, OH, OR4, NH2, NHR4, NR4R5, SH or SR5; Y is independently H, halo; and each R4 and R5 is independently hydrogen, acyl, alkyl, lower alkyl, alkenyl, alkynyl or cycloalkyl, and their pharmaceutically acceptable salts and derivs. are described. These prodrugs are useful in the prevention and treatment of Flaviviridae infections, including HCV infection, and other related conditions. Compds. and compns. of the prodrugs of the present invention are described. Methods and uses are also provided that include the administration of an effective amount of the prodrugs of the present invention, or their pharmaceutically acceptable salts or derivs. These drugs may optionally be administered in combination or alteration with further anti-viral agents to prevent or treat Flaviviridae infections and other related conditions. Thus, antiviral activity of β-D-2'-C-methyl-7-methyl-6-phenyl-3,3a,5,8a-tetrahydro-1,3,4,5,7a-penta-aza-s-indacen-8-one is reported.

IC ICM C07H019-00

CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 34, 63

ST human Flaviviridae antiviral prodrug amino acid nucleoside prepn

IT Antiviral agents
Flaviviridae
Human
(preparation of modified and nucleoside prodrugs for treating flaviviridae infections)

IT Amino acids, preparation
Nucleosides, preparation
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of modified and nucleoside prodrugs for treating flaviviridae infections)

IT Drug delivery systems
(prodrugs; preparation of modified and nucleoside prodrugs for treating flaviviridae infections)

IT Infection
(viral; preparation of modified and nucleoside prodrugs for treating flaviviridae infections)

IT 4099-85-8P 33985-40-9P 55797-67-6P 327614-68-6P 327614-69-7P 503543-43-9P 503543-44-0P 640281-90-9P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of modified and nucleoside prodrugs for treating flaviviridae infections)

IT 640281-91-0
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of modified and nucleoside prodrugs for treating flaviviridae infections)

IT 50-69-1, D-Ribose 13734-41-3 20724-73-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of modified and nucleoside prodrugs for treating flaviviridae infections)

L13 ANSWER 4 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 140:70987 MARPAT
TITLE: Nucleoside derivatives as inhibitors of RNA-dependent RNA viral polymerase
INVENTOR(S): Olsen, David B.; Maccoss, Malcolm; Bhat, Balkrishen; Eldrup, Anne B.
PATENT ASSIGNEE(S): Merck & Co., Inc., USA; Isis Pharmaceuticals, Inc.
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003138	A2	20040108	WO 2003-US19776	20030623

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,

LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-392438P 20020627

AB The invention provides nucleoside compds. and certain derivs. thereof which are inhibitors of RNA-dependent RNA viral polymerase. These compds. are inhibitors of RNA-dependent RNA viral replication and are useful for the treatment of RNA-dependent RNA viral infection. They are particularly useful as inhibitors of hepatitis C virus (HCV) NS5B polymerase, as inhibitors of HCV replication, and/or for the treatment of hepatitis C infection. The invention also describes pharmaceutical comprns. containing such nucleoside compds. alone or in combination with other agents active against RNA-dependent RNA viral infection, in particular HCV infection. Also disclosed are methods of inhibiting RNA-dependent RNA polymerase, inhibiting RNA-dependent RNA viral replication, and/or treating RNA-dependent RNA viral infection with the nucleoside compds. of the invention. Preparation of nucleoside derivs. is included.

IC ICM C12N

CC 1-5 (Pharmacology)
Section cross-reference(s): 33, 63

ST RNA dependent RNA polymerase inhibitor nucleoside deriv prepn antiviral; hepatitis C virus NS5B polymerase inhibitor nucleoside deriv antiviral

IT Drug delivery systems
(capsules; nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase, and use with other agents)

IT Nucleosides, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(derivs.; nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase)

IT Polyoxyalkylenes, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(interferon α conjugates; nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase, and use with other agents)

IT Antiviral agents
Drug delivery systems
Hepatitis C virus
RNA viruses
(nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase)

IT RNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α, and PEGylated interferon α; nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase, and use with other agents)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β; nucleoside derivs. as inhibitors of RNA-dependent RNA

viral polymerase, and use with other agents)
IT 9028-93-7, Inosine monophosphate dehydrogenase 149885-80-3, NS3 serine protease
RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors; nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase, and use with other agents)
IT 641571-38-2P 641571-39-3P 641571-40-6P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase)
IT 641571-41-7 641571-42-8 641571-43-9
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase)
IT 9026-28-2, RNA-dependent RNA polymerase
RL: BSU (Biological study, unclassified); BIOL (Biological study) (nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase, and use with other agents)
IT 25322-68-3D, Polyethylene glycol, interferon α conjugates 36791-04-5, Ribavirin 6952-94-4, Thymosin α-1 206269-27-4, Levovirin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase, and use with other agents)
IT 753-90-2, Trifluoroethylamine 1668-10-6, Glycine amide hydrochloride 3196-73-4, β-Alanine methyl ester hydrochloride 10310-21-1, 2-Amino-6-chloropurine 30361-19-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase, and use with other agents)
IT 640725-74-2P 641571-44-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase, and use with other agents)

L13 ANSWER 5 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 139:365176 MARPAT
TITLE: Preparation of nucleoside derivatives for treating hepatitis C virus infection
INVENTOR(S): Roberts, Christopher Don; Dyatkina, Natalia B.; Keicher, Jesse D.; Liehr, Sebastian Johannes Reinhard; Hanson, Eric Jason
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., USA
SOURCE: PCT Int. Appl., 182 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2003093290	A2	20031113	WO 2003-US14237	20030506	
WO 2003093290	A3	20040318			
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004063658	A1	20040401	US 2003-431631	20030506	
PRIORITY APPLN. INFO.:			US 2002-378624P	20020506	
			US 2002-392871P	20020628	

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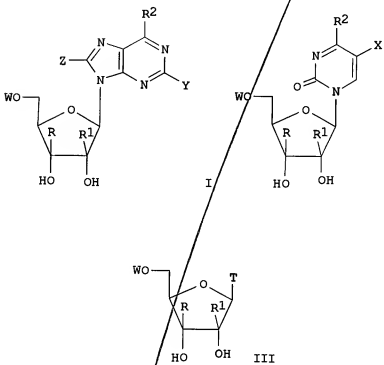

AB Nucleosides I-III, wherein R and R1 are independently H, alkyl, alkenyl, alkynyl, provided that R and R1 are not both H; R2 is alkyl, cycloalkyl, alkenyl, alkynyl, acylamino, guanidino, amidino, thioacylamino, OH, alkoxy, halo, nitro, aryl, heteroaryl, substituted amine; W is H, phosphate, phosphonate, acyl, alkyl, sulfonate, lipid, amino acid, sugar residue, peptide, cholesterol; X is H, halo, alkyl, substituted amine; Y is H, halo, OH, alkylthio, substituted amine; Z is H, halo, OH, alkyl, substituted amine; T is

nucleobase, were prepared as HCV RNA polymerase inhibitors and for treating hepatitis C virus infections. Thus, 2-(4-amino-pyrrolo[3,2-c]pyridin-1-yl)-5-hydroxymethyl-3-methyltetrahydro-furan-3,4-diol was prepared for treating hepatitis C virus infections (no data). Different kind of formulation such as tablet, capsule, suspension, injectable, and suppository formulation are reported.

IC ICM C07H019-02

CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 7, 63

ST human nucleoside prepn hepatitis C antiviral prodrug formulation; nucleoside prepn hepatitis C virus antiviral polymerase inhibitor prodrug

IT Drug delivery systems
(capsules; preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT Drug delivery systems
(injections; preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT Antiviral agents
Hepatitis C virus
Human
(preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT Nucleosides, preparation
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT Drug delivery systems
(prodrugs; preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT Drug delivery systems
(suppositories; preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT Drug delivery systems
(suspensions; preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT Drug delivery systems
(tablets; preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT Infection
(viral; preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT 9026-28-2, RNA dependent RNA polymerase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Hepatitis C virus; preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT 3969-27-5P 6736-58-9P 31448-54-1P 35997-19-4P 36707-00-3P
53437-77-7P 56973-12-7P 87357-64-0P 119410-84-3P
172605-95-7P 202806-40-4P 205171-06-8P 268741-31-7P
306960-38-3P 306960-39-4P 374750-32-0P 405231-10-9P
443642-33-9P 443642-45-3P 444019-88-9P 565435-10-1P
565435-18-9P 565435-22-5P 565435-24-7P 622379-52-6P
622379-53-7P 622379-54-8P 622379-56-0P 622379-57-1P
622379-58-2P 622379-59-3P 622379-60-6P 622379-61-7P

622379-62-8P 622379-63-9P 622379-65-1P 622379-70-8P
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622380-38-5P 622380-39-6P 622380-40-9P 622380-41-0P
622380-43-2P 622380-45-4P 622380-47-6P 622380-48-7P
622380-49-8P 622380-50-1P 622380-51-2P 622380-52-3P
622380-53-4P 622380-54-5P 622380-55-6P 622380-56-7P
622380-57-8P 622380-58-9P 622380-59-0P 622380-60-3P
622380-61-4P 622380-62-5P 622380-63-6P 622380-64-7P
622380-65-8P 622380-66-9P 622380-67-0P 622380-68-1P
622380-69-2P 622380-70-5P 622380-71-6P 622380-72-7P
622380-73-8P 622380-74-9P 622380-75-0P 622380-76-1P
622380-77-2P 622380-78-3P 622380-79-4P 622380-80-7P
622380-81-8P 622380-82-9P 622380-83-0P 622380-84-1P
622380-85-2P 622380-86-3P 622380-87-4P 622380-88-5P
622380-89-6P 622380-90-9P 622380-91-0P 622380-92-1P
622380-93-2P 622380-94-3P 622380-95-4P 622380-96-5P
622380-97-6P 622380-98-7P 622380-99-8P 622381-00-4P
622381-01-5P 622381-02-6P 622381-03-7P 622381-04-8P
622381-05-9P 622381-06-0P 622381-08-2P 622381-09-3P
622381-10-6P 622381-11-7P 622381-12-8P 622381-13-9P
622381-17-3P 622381-18-4P 622381-20-8P 622381-27-5P
622381-29-7P 622381-31-1P

RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT 22387-37-7P 172722-76-8P 622379-55-9P 622379-64-0P
622379-66-2P 622379-67-3P 622379-68-4P 622379-69-5P
622379-75-3P 622379-76-4P 622379-80-0P 622379-81-1P
622379-83-3P 622379-84-4P 622379-85-5P 622379-87-7P
622379-88-8P 622379-91-3P 622379-92-4P 622379-94-6P
622379-99-1P 622380-02-3P 622380-06-7P 622380-09-0P
622380-13-6P 622380-14-7P 622380-15-8P 622380-18-1P
622380-21-6P 622380-22-7P 622380-24-9P 622380-26-1P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT 50-66-8, 6-Methylthiopurine 51-17-2, Benzimidazole 51-45-6, 1H-Imidazole-4-ethanamine, reactions 61-54-1, Tryptamine 67-62-9, Methoxylamine 69-33-0, Tubercidin 80-70-6 94-52-0 98-80-6, Phenyl boronic acid 107-20-0, Chloroacetaldehyde 108-91-8, Cyclohexylamine, reactions 123-75-1, Pyrrolidine, reactions 461-89-2, 1,2,4-Triazine-3,5(2H,4H)-dione 503-29-7, Azetidine 626-03-9 694-05-3 765-30-0, Cyclopropylamine 767-69-1 1003-03-8, Cyclopentylamine 2589-12-0 2946-39-6

3230-65-7 6165-69-1 6974-32-9 7531-52-4, L-Proline amide
10416-59-8, N,O-Bis(trimethylsilyl)acetamide 10597-52-1
15397-12-3 15397-15-6 16502-01-5 17952-80-6 27578-60-5,
1-Piperidineethanamine 34259-36-4 37497-65-7 49721-45-1
67139-79-1 83683-82-3 84765-98-0 106157-98-6 205171-05-7
443642-29-3 622379-55-9 622379-95-7 622380-03-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of nucleoside derivs. for treating hepatitis C virus infection)

IT 937-14-4, 3-Chloroperoxybenzoic acid
RL: RGT (Reagent); RACT (Reactant or reagent)
(preparation of nucleoside derivs. for treating hepatitis C virus infection)

L13 ANSWER 6 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 139:191380 MARPAT
TITLE: Methods of inhibiting orthopoxvirus replication with nucleoside compounds
INVENTOR(S): Olsen, David B.; Lafemina, Robert L.; Eldrup, Anne B.; Bera, Sanjib
PATENT ASSIGNEE(S): Merck & Co., Inc., USA; Isis Pharmaceuticals, Inc.
SOURCE: PCT Int. Appl., 99 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003068244	A1	20030821	WO 2003-US3703	20030207

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-356805P 20020213

AB The present invention provides methods of inhibiting orthopoxvirus replication and/or treating orthopoxvirus infection with certain nucleoside compds. and derivs. thereof. These compds. are particularly useful as inhibitors of vaccinia virus and variola virus replication and/or for the treatment of vaccinia virus and variola virus infection. The nucleoside compds. may be administered alone or in combination with other agents active against orthopoxvirus infection, in particular against vaccinia virus or variola virus infection. Another aspect of the present invention provides for the use of such nucleoside compds. in the manufacture of a medicament for the inhibition of orthopoxvirus replication and/or for the treatment of orthopoxvirus infection. Yet a further aspect

of the present invention provides such nucleoside compds. for use as a medicament for the inhibition of orthopoxvirus replication and/or for the treatment of orthopoxvirus infection.

IC ICM A61K031-7052
ICS A61K031-7076; A61K031-708
CC 1-5 (Pharmacology)
ST antiviral nucleoside orthopoxvirus infection prepn HIV
IT AIDS (disease)
Anti-AIDS agents
Antiviral agents
Human
Human immunodeficiency virus 1
Mammalia
Orthopoxvirus
Vaccinia virus
Variola virus
(inhibiting orthopoxvirus replication with nucleoside compds.)
IT Nucleosides, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibiting orthopoxvirus replication with nucleoside compds.)
IT Infection
(viral; inhibiting orthopoxvirus replication with nucleoside compds.)
IT 141232-24-8P 443642-29-3P 443642-96-4P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(inhibiting orthopoxvirus replication with nucleoside compds.)
IT 139209-26-0P 443642-28-2P 443642-34-0P 443642-38-4P
443642-41-9P 443642-42-0P 443642-43-1P 443642-44-2P
443642-45-3P 443642-46-4P 443642-47-5P 443642-48-6P
443642-49-7P 443642-53-3P 443642-56-6P 443642-57-7P
443642-60-2P 443642-63-5P 443642-66-8P 443642-67-9P
443642-74-8P 443642-80-6P 443642-83-9P 443642-86-2P
443642-87-3P 443642-88-4P 443642-89-5P 443642-95-3P
443642-97-5P 443643-17-2P 582313-35-7P 582313-51-7P
582313-58-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(inhibiting orthopoxvirus replication with nucleoside compds.)
IT 36791-04-5, Ribavirin 113852-37-2, Cidofovir 119567-79-2, Viramidine 206269-27-4, Levovirin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibiting orthopoxvirus replication with nucleoside compds.)
IT 60-24-2, 2-Mercaptoethanol 69-33-0, Tubercidin 74-89-5, Methylamine, reactions 94-99-5 111-64-8, Octanoyl chloride 124-40-3, Dimethylamine, reactions 128-08-5, N-Bromosuccinimide 128-09-6, N-Chlorosuccinimide 512-56-1, Trimethyl phosphate 765-30-0, Cyclopropylamine 872-50-4, 1-Methyl-2-pyrrolidinone, reactions 874-60-2, p-Toluoyl chloride 921-26-6, Diisopropylphosphoramidous dichloride 3680-69-1, 4-Chloro-7H-pyrrolo[2,3-d]pyrimidine 10310-21-1, 2-Amino-6-chloropurine 14470-28-1 15397-15-6 18162-48-6,

tert-Butyldimethylsilyl chloride 20031-21-4, 1,2-O-Isopropylidene-D-xylofuranose 84955-31-7, 2-Amino-4-chloro-7H-pyrrolo[2,3-d]pyrimidine 85335-76-8 90358-16-0 168427-36-9 291535-60-9 443642-59-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(inhibiting orthopoxvirus replication with nucleoside compds.)

IT 22276-95-5P 168427-35-8P 443642-30-6P 443642-31-7P
443642-32-8P 443642-33-9P 443642-35-1P 443642-36-2P
443642-37-3P 443642-39-5P 443642-40-8P 443642-50-0P
443642-51-1P 443642-52-2P 443642-54-4P 443642-55-5P
443642-58-8P 443642-62-4P 443642-64-6P 443642-65-7P
443642-70-4P 443642-71-5P 443642-72-6P 443642-73-7P
443642-77-1P 443642-78-2P 443642-79-3P 443642-81-7P
443642-82-8P 443642-84-0P 443642-85-1P 443642-90-8P
443642-91-9P 443642-92-0P 443642-93-1P 443642-94-2P
582313-25-5P 582313-26-6P 582313-27-7P 582313-28-8P
582313-29-9P 582313-43-7P 582313-45-9P 582313-47-1P
582313-49-3P 582313-53-9P 582313-55-1P 582313-56-2P
582313-57-3P 582313-59-5P 582313-60-8P 582313-61-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(inhibiting orthopoxvirus replication with nucleoside compds.)

IT 205067-58-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(inhibiting orthopoxvirus replication with nucleoside compds.)

IT 9012-90-2, DNA polymerase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α and β; inhibiting orthopoxvirus replication with nucleoside compds.)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 139:133791 MARPAT
TITLE: Preparation of deazapurine nucleoside analogs as antiviral agents
INVENTOR(S): An, Haoyun; Ramasamy, Kanda; Chamakura, Varaprasad; Hong, Zhi
PATENT ASSIGNEE(S): Ribapharm Inc., USA
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003062257	A1	20030731	WO 2003-US1557	20030117

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,

VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 2002-350296P 20020117
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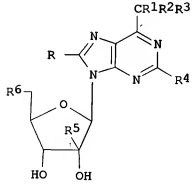

I

AB Methods, compns., and uses for various nucleoside analog libraries I wherein wherein the sugar is in D- or L-configuration; R is H, or halogen, or optionally substituted alkyl, alkenyl, alkynyl, or aryl; R1-R3 are independently optionally substituted alkyl, alkenyl, alkynyl, aryl, or H, or where R1 and R2 are H, R3 is alkyl-NR'R", alkyl-ONR'R", alkyl-NR'NR'R", alkyl-SR', alkyl-OR', or alkyl-CN; R4 is H or NH2; R5 is optionally substituted alkyl, alkenyl, alkynyl, aryl, or CN, or CF3; R6 is H, OH, phosphate, phosphonate, or boranophosphate; and R' and R" are independently H, OH, or optionally substituted alkyl, alkenyl, alkynyl, aryl; and library compds. are provided. Particularly preferred nucleosides include 6-C-purine nucleosides, 7/8-substituted purine nucleosides, pyrazolopyrimidine nucleoside analogs, various pyrimidine nucleosides, and triazine nucleosides, while preferred uses especially include use of such compds. as pharmacol., and particularly antiviral agents (no data). Thus, 6-chloro-9H-(2'-β-C-methyl-2',3',5'-tri-O-benzoyl-β-D-ribofuranosyl)purine was prepared via coupling reaction of 6-chloropurine and 2'-3-C-methyl-1,2,3,5-tetra-O-benzoyl-D-ribose in 95% yield as antiviral agent (no data).

IC ICM C07H019-00
ICS A01N043-04; A61K031-70

CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 63

ST deazapurine nucleoside combinatorial library prepn antiviral

IT Antiviral agents
Combinatorial library
(preparation of deazapurine nucleoside analogs as antiviral agents)

IT Nucleosides, preparation
RL: CPN (Combinatorial preparation); PAC (Pharmacological activity);

THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)
(preparation of deazapurine nucleoside analogs as antiviral agents)

IT Infection
(viral; preparation of deazapurine nucleoside analogs as antiviral agents)

IT 131-62-4P 10505-27-8P 15397-16-7P 16434-48-3P 83824-38-8P 87413-09-0P, Dess-Martin reagent 565432-24-8P
RL: CPN (Combinatorial preparation); CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of deazapurine nucleoside analogs as antiviral agents)

IT 205171-04-6P 565432-22-6P 565432-23-7P
RL: CPN (Combinatorial preparation); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)
(preparation of deazapurine nucleoside analogs as antiviral agents)

IT 87-42-3, 6-Chloropurine 88-67-5 3920-40-9 19172-47-5, Lawesson's reagent 30361-19-4 92534-73-1 157037-56-4 565450-65-9
RL: CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); RACT (Reactant or reagent)
(preparation of deazapurine nucleoside analogs as antiviral agents)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 28 MARPAT COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 139:133790 MARPAT

TITLE: Preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents

INVENTOR(S): An, Haoyun; Ding, Yili; Shaw, Stephanie; Hong, Zhi

PATENT ASSIGNEE(S): Ribapharm Inc., USA

SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003062256	A1	20030731	WO 2002-US34026	20021023

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-350296P 20020117

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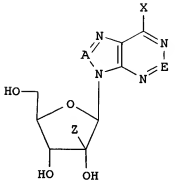

I

AB Various 2'-beta-methyl-6-substituted adenosine analogs I in which Z is selected from the group consisting of an alkyl, an O-alkyl, an alkenyl, an alkynyl, and CN, wherein the alkyl, the alkenyl, or the alkynyl is optionally substituted with a halogen or OH; A is CH or N, and E is C-R6 or N, such that (1) when A is CH then E is C-R6 or N, and (2) when A is N then E is CH; X is NR1R2, NR2NR3R4, NR2N=NR3, NR2N=CHR3, NR2N=O, NR2C(=O)NR3R4, NR2C(=S)NR3R4, NR2C(=NH)NR3R4, NR1C(=O)NR2NR3R4, NR2OR3, ONHC(O)O-alkyl, ONHC(O)O-aryl, ONR3R4, SNR1R2, SONR1R2, or S(O)2NR1R2; wherein R1-R4 are independently H, alkyl, substituted alkyl, O-alkyl, cyclic alkyl, heterocyclic alkyl, alkoxy, alkaryl, aryl, heterocyclic aryl, substituted aryl, acyl, substituted acyl, S(O)2-alkyl, NO, NH2, or OH; and R6 is H, NH2, halogen, N3, NHR1, NHCOR1 NR1R2, NHSO2R1, NHCONHR1, NHCSNHR1, CH2NHR1, CHR1NHR2, NHNH2, CN, alkyl, alkenyl, alkynyl, CH2-aryl, CH2-heterocycle, halogen, OH, or SH; are prepared by conventional and combinatorial library approaches. Contemplated compds. are particularly useful as therapeutic agents, and especially as antiviral agents. Thus, N6-[3-(methylthio)phenyl]-9H-(2'-β-C-methyl-β-D-ribofuranosyl)adenine was prepared and tested in vitro as antiviral agent against influenza virus A, bovine viral diarrhea virus, Hepatitis B virus, HIV-1 virus and human Rhinovirus.

IC ICM C07H019-00
ICS A01N043-04; A61K031-70

CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 63

ST human combinatorial prepn library adenosine nucleoside antiviral

IT Antidiarrheals
Antiviral agents
Bovine diarrhea virus
Combinatorial library
Diarrhea
Hepatitis B virus
Human
Human immunodeficiency virus 1
Human rhinovirus
Influenza A virus

(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

IT Nucleosides, preparation
RL: CPN (Combinatorial preparation); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)
(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

IT Infection
(viral; preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

IT 205171-05-7P
RL: CPN (Combinatorial preparation); CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

IT 565435-03-2P 565435-04-3P 565435-05-4P 565435-06-5P
565435-07-6P 565435-08-7P 565435-10-1P 565435-11-2P
565435-12-3P 565435-13-4P 565435-14-5P 565435-15-6P
565435-16-7P 565435-17-8P 565435-18-9P 565435-19-0P
565435-20-3P 565435-21-4P 565435-22-5P 565435-23-6P
RL: CPN (Combinatorial preparation); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)
(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

IT 57-14-7, N,N-Dimethylhydrazine 60-34-4, Methylhydrazine 107-15-3, Ethylenediamine, reactions 109-84-2, 2-Hydroxyethylhydrazine 141-43-5, reactions 582-22-9, β-Methylphenylethylamine 624-84-0, Formylhydrazine 1068-57-1, Acetic hydrazide 1117-97-1, N,O-Dimethylhydroxylamine 1783-81-9, 3-(Methylthio)aniline 6294-89-9, Methylhydrazinocarboxylate 7202-43-9 22195-47-7 36016-38-3, tert-Butyl-N-hydroxycarbamate 37806-29-4, 2-Ethoxybenzylamine 205171-04-6
RL: CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); RACT (Reactant or reagent)
(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

IT 565435-09-8 565435-24-7
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 139:133789 MARPAT
TITLE: Preparation of sugar modified nucleosides as antiviral agents
INVENTOR(S): Hong, Zhi; An, Haoyun; Ding, Yili; Girardet, Jean-luc; Zhong, Weidong
PATENT ASSIGNEE(S): Ribapharm Inc., USA

SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003062255	A2	20030731	WO 2002-US31556	20021002

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-350296P 20020117
US 2002-391800P 20020626

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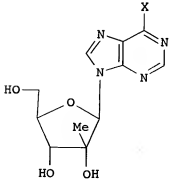

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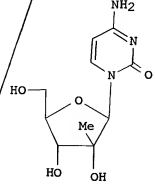


II

AB Various 2'-modified nucleoside analogs I and II wherein X is NH2, NHMe, NMe2, OMe, SMe, and corresponding prodrugs are provided, and particularly contemplated methods of use include use as antiviral agents, and especially as antiviral agents against HCV.

IC ICM C07H
CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 63
ST nucleoside prepn antiviral human cytotoxicity
IT Antiviral agents
Cytotoxicity
Human
(preparation of sugar modified nucleosides as antiviral agents)
IT Nucleosides, preparation
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of sugar modified nucleosides as antiviral agents)
IT Drug delivery systems
(prodrugs; preparation of sugar modified nucleosides as antiviral agents)
IT Infection
(viral; preparation of sugar modified nucleosides as antiviral agents)
IT 15397-12-3P 172722-76-8P 565450-71-7P 565450-72-8P
565450-73-9P 565450-74-0P 565450-75-1P 565450-76-2P
565450-77-3P 565450-78-4P 565450-81-9P 565450-82-0P
565450-83-1P 565450-84-2P 565450-85-3P 565450-86-4P
565450-90-0P 565450-91-1P 565450-92-2P 565450-95-5P
565450-96-6P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of sugar modified nucleosides as antiviral agents)
IT 20724-73-6 31448-54-1 119410-84-3 565450-97-7 565450-98-8
565450-99-9 565451-00-5 565451-01-6 565451-02-7 565451-03-8
565451-04-9 565451-05-0 565451-06-1 565451-07-2 565451-08-3
565451-09-4 565451-10-7 565451-11-8
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of sugar modified nucleosides as antiviral agents)
IT 58-63-9, Inosine 87-42-3, 6-Chloropurine 925-90-6, Ethylmagnesium bromide 4333-56-6, Cyclopropyl bromide
182825-17-8 205171-04-6 565450-65-9 565450-93-3 565451-50-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of sugar modified nucleosides as antiviral agents)
IT 119898-59-8P 127212-34-4P 327614-73-3P 565450-66-0P
565450-67-1P 565450-68-2P 565450-69-3P 565450-70-6P
565450-79-5P 565450-80-8P 565450-87-5P 565450-88-6P
565450-89-7P 565450-94-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of sugar modified nucleosides as antiviral agents)
IT 565451-12-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of sugar modified nucleosides as antiviral agents)

L13 ANSWER 10 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 139:133787 MARPAT
TITLE: Preparation of deazapurine nucleoside analogs as antiviral agents
INVENTOR(S): An, Haoyun; Ding, Yili; Chamakura, Varaprasad; Hong, Zhi
PATENT ASSIGNEE(S): Ribapharm Inc., USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

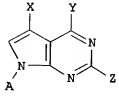
WO 2003061576	A2	20030731	WO 2003-US1545	20030117
WO 2003061576	A3	20040401		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-350296P 20020117

GI



I

AB Methods, compns., and uses for various deazapurine nucleoside libraries and library compds. I are provided. Particularly preferred deazapurine nucleosides include 7-deazapurine nucleosides, 7-deaza-8-azapurine nucleosides, toyocamycin nucleoside analogs, 3-deazapurine nucleosides, and 9-deazapurine nucleosides, while preferred uses especially include use of such compds. as pharmacol., and particularly antiviral agents. 4-N,N-dimethylamino-7-(β-D-ribofuranosyl)pyrrolo[2,3-d]pyrimidine-5-N-hydroxycarbamidine was prepared and tested in vitro as antiviral agent.

IC ICM A61K

CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 63

ST deazapurine nucleoside prepn antiviral toyocamycin combinatorial library human cytotoxicity

IT Antiviral agents
Combinatorial library
Cytotoxicity
Human
(preparation of deazapurine nucleoside analogs as antiviral agents)

IT Nucleosides, preparation
RL: CPN (Combinatorial preparation); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)
(preparation of deazapurine nucleoside analogs as antiviral agents)

IT Infection
(viral; preparation of deazapurine nucleoside analogs as antiviral agents)

IT 9026-28-2, RNA-dependent RNA polymerase

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of deazapurine nucleoside analogs as antiviral agents)
IT 51112-63-1P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of deazapurine nucleoside analogs as antiviral agents)
IT 35943-36-3P 57071-76-8P 565455-07-4P 565455-09-6P
565455-10-9P 565455-11-0P 565455-16-5P 565455-20-1P
565455-21-2P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of deazapurine nucleoside analogs as antiviral agents)
IT 565455-24-5 565455-25-6 565455-26-7 565455-27-8 565455-28-9
565455-29-0 565455-30-3 565455-31-4
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of deazapurine nucleoside analogs as antiviral agents)
IT 141232-24-8 151707-53-8 151707-54-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of deazapurine nucleoside analogs as antiviral agents)
IT 606-58-6P 52443-16-0P 57071-52-0P 57071-68-8P 57071-69-9P
57071-71-3P 565455-08-5P 565455-12-1P 565455-13-2P
565455-14-3P 565455-15-4P 565455-17-6P 565455-18-7P
565455-19-8P 565455-22-3P 565455-23-4DP, resin bound
565455-23-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of deazapurine nucleoside analogs as antiviral agents)

L13 ANSWER 11 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 139:127989 MARPAT
TITLE: Tricyclic nucleoside derivatives for use as antiviral agents
INVENTOR(S): An, Haoyun; Hong, Zhi; Smith, Kenneth; Ding, Yili; Girardet, Jean-luc
PATENT ASSIGNEE(S): Ribapharm Inc., USA
SOURCE: PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003061385	A1	20030731	WO 2002-US31369	20021001

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,

BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-350249P 20020117
US 2002-395241P 20020710

AB Tricyclic nucleoside libraries and library compds. are prepared using combinatorial chemical and non-combinatorial chemical methods. Contemplated library compds. are particularly useful in inhibition of viral propagation, and particularly of viral propagation of the HCV virus. Thus, 6-amino-8-(β-D-ribofuranosyl)-4-methylpyrrolo[4,3,2-de]pyrimido[4,5-c]pyridazine (triciribin) was synthesized. This inhibited hepatitis C virus in Huh-7 cells with EC50 of <10 μM.

IC ICM A01N043-04
ICS A61K031-70

CC 1-5 (Pharmacology)
Section cross-reference(s): 33

ST tricyclic nucleoside deriv antiviral

IT Drug delivery systems
(prodrugs; tricyclic nucleoside derivs. for use as antiviral agents)

IT Antiviral agents
Hepatitis C virus
Human
(tricyclic nucleoside derivs. for use as antiviral agents)

IT Nucleoside analogs
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(tricyclic nucleoside derivs. for use as antiviral agents)

IT Liver
(viral infections of; tricyclic nucleoside derivs. for use as antiviral agents)

IT 35943-35-2P, Triciribine 566152-67-8P 566152-69-0P
566152-71-4P 566152-73-6P 566152-75-8P
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(tricyclic nucleoside derivs. for use as antiviral agents)

IT 60-34-4, Methylhydrazine 302-01-2, Hydrazine, reactions
6629-60-3 19393-83-0 20570-96-1, Benzylhydrazine dihydrochloride
57071-68-8 141232-24-8 566152-76-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(tricyclic nucleoside derivs. for use as antiviral agents)

IT 57071-52-0P 285127-57-3P 565455-17-6P 565455-18-7P
566152-66-7P 566152-68-9P 566152-70-3P 566152-72-5P
566152-74-7P 566152-77-0P 566152-78-1P 566152-79-2P
566152-80-5P 566152-81-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(tricyclic nucleoside derivs. for use as antiviral agents)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

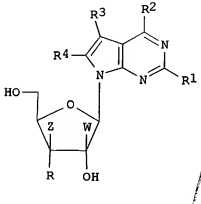
L13 ANSWER 12 OF 28 MARPAT COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 139:53258 MARPAT
TITLE: Solid phase synthesis and combinatorial libraries of deazapurine nucleosides useful in the treatment of viral infections and neoplastic diseases
INVENTOR(S): Girardet, Jean-Luc; An, Haoyun; Chamakura, Varaprasad; Gunic, Esmir; Hong, Zhi
PATENT ASSIGNEE(S): Ribapharm Inc., USA
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051899	A1	20030626	WO 2002-US40416	20021217

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-342410P 20011217
GI



I

AB Deazapurine nucleoside analogs I, wherein R is H, OH; R1-R4 are independently H, halogen, NH2, NHR', R', CN, CONH2, N3, CH2CN; R' is substituted alkyl, unsubstituted alkyl, substituted aryl, and an unsubstituted aryl; W and Z are independently hydrogen, N3, NH2, OH, SH, R5, or NHR5 wherein R5 is an alkyl, substituted alkyl, alkenyl,

a substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl; are prepared in a combinatorial library approach. Particularly preferred compds. and libraries include various 7-deazapurines, 9-deazapurines, and 7-deaza-8-azaguanosine as heterocyclic bases, and it is generally preferred that such nucleosides include a ribofuranose as the sugar moiety. It is further contemplated that compds. generated using contemplated libraries may be useful in the treatment of various conditions, particularly viral infections and neoplastic diseases (no data). Thus, I (R = OH; R1 = R4 = Z = W = H; R2 = NHBn; R3 = Ph) was prepared useful in the treatment of viral infections and neoplastic diseases.

IC ICM C07H019-00
ICS C07H019-22

CC 33-9 (Carbohydrates)
Section cross-reference(s): 1

ST deazapurine nucleoside synthesis combinatorial library potential antiviral antitumor

IT Solid phase synthesis
(combinatorial; solid phase synthesis and combinatorial libraries of deazapurine nucleosides useful in treatment of viral infections and neoplastic diseases)

IT Combinatorial library
(solid phase synthesis and combinatorial libraries of deazapurine nucleosides useful in treatment of viral infections and neoplastic diseases)

IT Nucleosides, preparation
RL: CPN (Combinatorial preparation); CMBI (Combinatorial study); PREP (Preparation)
(solid phase synthesis and combinatorial libraries of deazapurine nucleosides useful in treatment of viral infections and neoplastic diseases)

IT 547754-28-9P 547754-31-4P 547754-33-6P 547754-35-8P
547754-36-9P 547754-40-5P 547754-42-7P
RL: CPN (Combinatorial preparation); CMBI (Combinatorial study); PREP (Preparation)
(solid phase synthesis and combinatorial libraries of deazapurine nucleosides useful in treatment of viral infections and neoplastic diseases)

IT 18440-68-1P 24386-91-2DP, 4-methoxytrityl resin support
52443-16-0DP, 4-methoxytrityl resin support 332363-35-6P
547754-20-1P 547754-21-2P 547754-22-3P 547754-23-4DP, 4-methoxytrityl resin support 547754-23-4P 547754-24-5DP, 4-methoxytrityl resin support 547754-25-6DP, 4-methoxytrityl resin support 547754-26-7DP, 4-methoxytrityl resin support
547754-27-8DP, 4-methoxytrityl resin support 547754-28-9DP, 4-methoxytrityl resin support 547754-29-0DP, 4-methoxytrityl resin support 547754-30-3DP, 4-methoxytrityl resin support
547754-32-5DP, 4-methoxytrityl resin support 547754-34-7DP, 4-methoxytrityl resin support 547754-36-9DP, 4-methoxytrityl resin support 547754-37-0P 547754-38-1DP, 4-methoxytrityl resin support 547754-38-1P 547754-39-2DP, 4-methoxytrityl resin support 547754-40-5DP, 4-methoxytrityl resin support
547754-41-6DP, 4-methoxytrityl resin support 547754-42-7DP, 4-methoxytrityl resin support
RL: CPN (Combinatorial preparation); CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); PREP (Preparation); RACT

(Reactant or reagent)
(solid phase synthesis and combinatorial libraries of deazapurine nucleosides useful in treatment of viral infections and neoplastic diseases)

IT 100-46-9, Benzylamine, reactions 128-08-5, N-Bromosuccinimide 920-66-1 960-16-7, Tributylphenyl tin 14470-28-1D, resin derivs. 14470-28-1D, resin reaction products with nucleosides 22483-09-6 24386-91-2 52443-16-0 118486-94-5 151707-54-9 547754-41-6
RL: CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); RACT (Reactant or reagent)
(solid phase synthesis and combinatorial libraries of deazapurine nucleosides useful in treatment of viral infections and neoplastic diseases)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 13 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 138:397888 MARPAT
TITLE: Oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy
INVENTOR(S): Wengel, Jesper
PATENT ASSIGNEE(S): Exiqon A/S, Den.
SOURCE: PCT Int. Appl., 141 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003039523	A2	20030515	WO 2002-IB5080	20021105
WO 2003039523	A3	20031204		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DK 2001-1640 20011105
US 2001-337447P 20011105

AB The invention relates to novel α-L-RNA monomers, which, when incorporated into an oligonucleotide impair a higher tendency towards hybridization with a RNA complement, as compared to a DNA complement. The invention also relates to a process for the preparation of an α-L-RNA modified oligonucleotide and an intermediate for manufacturing the same. The novel oligonucleotides are useful for a variety of therapeutic, diagnostic, and general mol. biol. applications. Thus, oligonucleotides comprising α-L-RNA

monomers sometimes exhibited lower hybridization tendencies with DNA than with RNA. The hybridization efficiency may be increased by incorporating LNA monomers into the oligonucleotide. Introduction of α-L-RNA monomers in oligonucleotides increased their resistance to nucleases.

IC ICM A61K009-70
ICS A61K009-20; A61K009-48

CC 6-2 (General Biochemistry)
Section cross-reference(s): 1, 33

ST oligonucleotide alpha L arabinofuranose synthesis diagnosis therapy

IT Uterus, neoplasm
(cervix; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Intestine, neoplasm
(colorectal; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Antibodies
DNA
Enzymes, biological studies
Haptens
Peptide nucleic acids
Peptides, biological studies
Polysaccharides, biological studies
Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(complexes with α-L-ribonucleoside-containing oligonucleotides; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Liver, disease
(failure; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Disease, animal
(genetic; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Nucleosides, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(locked, oligonucleotide analogs containing; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Mesothelium, neoplasm
(mesothelioma; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Neoplasm
(metastasis; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Neck, anatomical
(neoplasm; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Nerve, disease
(neuropathy; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Solid phase synthesis
(oligonucleotide; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Anti-AIDS agents

Anti-infective agents
Antitumor agents
Autoimmune disease
Bladder, neoplasm
Blood, disease
Brain, neoplasm
Cardiovascular system, disease
Digestive tract, disease
Head, neoplasm
Leukemia
Liver, neoplasm
Lung, neoplasm
Mammary gland, neoplasm
Muscle, disease
Nervous system, disease
Ovary, neoplasm
Prostate gland, neoplasm
Sarcoma
Skin, neoplasm
(oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Oligonucleotides
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Kidney, neoplasm
(renal cell carcinoma; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Nucleosides, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α-L-arabinose-containing; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT RNA
mRNA
RL: PUR (Purification or recovery); PREP (Preparation)
(α-L-ribonucleoside-containing oligonucleotides and purification of; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Double stranded RNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α-L-ribonucleoside-containing oligonucleotides binding to; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT Acylation
Alkylation
Diels-Alder reaction
(α-L-ribonucleoside-containing oligonucleotides catalysis of; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT 528622-32-4P 528622-33-5P 528622-34-6P
RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(oligonucleotides containing α-L-ribonucleosides, their

synthesis and use in diagnosis and therapy)

IT 527707-76-2P 527707-80-8P 528622-24-4P 528622-25-5P
528622-26-6P 528622-27-7P 528622-28-8P 528622-29-9P
528622-30-2P 528622-31-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT 98-88-4, Benzoyl chloride 100-39-0, Benzyl bromide 108-24-7, Acetic anhydride 124-63-0, Methane sulfonyl chloride 420-04-2, Cyanamide 584-08-7, Potassium carbonate 922-67-8, Methyl propiolate 4005-49-6 18162-48-6, Tert-Butyldimethylsilyl chloride 24259-59-4, L-Ribose 40615-36-9, 4,4'-Dimethoxytrityl chloride 89992-70-1 103763-14-0 137146-99-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT 24259-58-3P 68354-70-1P 110237-79-1P 168103-01-3P
179239-79-3P 179239-80-6P 179239-81-7P 433934-28-2P
433934-30-6P 433934-31-7P 433934-32-8P 433934-33-9P
525596-13-8P 525596-14-9P 525596-15-0P 525596-16-1P
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525596-21-8P 525596-22-9P 525596-23-0P 525596-24-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT 528650-81-9 528650-82-0 528650-83-1 528650-84-2 528650-85-3 528650-86-4
RL: PRP (Properties)
(unclaimed sequence; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT 9001-99-4, RNase 9003-98-9, DNase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α-L-ribonucleoside-containing oligonucleotides acting as; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

IT 63774-49-2, RNase H*
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α-L-ribonucleoside-containing oligonucleotides and activity of; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)

L13 ANSWER 14 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 138:221790 MARPAT
TITLE: Process for the synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups
INVENTOR(S): Dempcy, Robert O.; Adams, A. David; Reed, Michael W.
PATENT ASSIGNEE(S): Epoch Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

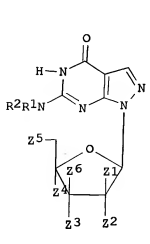
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022859	A2	20030320	WO 2002-US28476	20020905
WO 2003022859	A3	20031204		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003078413	A1	20030424	US 2001-954624	20010912

PRIORITY APPLN. INFO.: US 2001-954624 20010912
OTHER SOURCE(S): CASREACT 138:221790
GI



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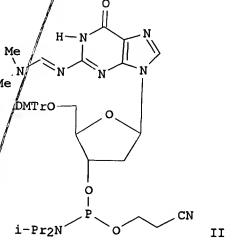


II

AB The present invention provides a nucleosides comprising a pyrazolopyrimidine base I and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the halogen after the base is coupled to a sugar moiety. The presence of the halogen on the nucleoside base allows facile and economical production of a large quantity of nucleosides. Thus, II was prepared via halogenation reaction and using photolabile hydroxy protecting groups.

IC ICM C07H
CC 33-9 (Carbohydrates)
ST pyrazolopyrimidine nucleoside synthesis halogenation protecting group

IT Halogenation
Protective groups
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

IT Nucleosides, preparation
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

IT 5604-46-6P 100644-65-3P 100644-67-5P 100644-70-0P
118907-72-5P 118907-74-7P 203180-01-2P 203180-05-6P
203180-15-8P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

IT 500891-26-9P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

IT 56-09-7 68-12-2, Dimethyl formamide, reactions 2591-86-8, 1-Formylpiperidine 3601-89-6 4394-85-8, 1-Formylmorpholine 4637-24-5, Dimethylformamide dimethylacetal 10025-87-3, Phosphoric trichloride 25891-31-0, Triformamide 102691-36-1 156876-26-5 179691-31-7 500891-28-1 500891-29-2 500891-31-6 500891-32-7 500891-33-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

IT 516-12-1 7719-09-7, Thionyl chloride 7790-99-0, Iodine monochloride
RL: RGT (Reagent); RACT (Reactant or reagent)
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

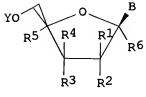
L13 ANSWER 15 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 137:125359 MARPAT
TITLE: Preparation of nucleoside derivatives as inhibitors of RNA-dependent RNA viral polymerase
INVENTOR(S): Carroll, Steven S.; Lafemina, Robert L.; Hall, Dawn L.; Himmelberger, Amy L.; Kuo, Lawrence C.; Maccoss, Malcolm; Olsen, David B.; Rutkowski, Carrie A.; Tomassini, Joanne E.; An, Haoyun; Bhat, Balkrishen; Bhat, Neelima; Cook, Phillip Dan; Eldrup, Anne B.; Guinosso, Charles J.; Prhavc, Marija; Prakash, Thazha P.
PATENT ASSIGNEE(S): Merck & Co., Inc., USA; Isis Pharmaceuticals, Inc.
SOURCE: PCT Int. Appl., 235 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002057425	A2	20020725	WO 2002-US1531	20020118
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002147160	A1	20021010	US 2002-52318	20020118
US 2004072788	A1	20040415	US 2003-431657	20030507
US 2004067901	A1	20040408	US 2003-688691	20031017
			US 2001-263313P	20010122
			US 2001-282069P	20010406
			US 2001-299320P	20010619
			US 2001-344528P	20011025
			US 2002-52318	20020118

PRIORITY APPLN. INFO.:

GI



I

AB The present invention provides the preparation of nucleoside compds. I, wherein B is nucleobase, Y is H, alkylcarbonyl, phosphate; R1 is H, alkenyl, alkynyl, alkyl; R2 and R3 are independently H, OH, halogen, alkyl, alkoxy, alkenyloxy, alkylthio, alkylcarbonyloxy, aryloxycrbonyl, azido, amino, alkylamino; R1 and R2 together with the carbon atom to which they are attached form a 3- to 6-membered heterocycle; R4 is H, OH, SH, NH2, alkylamino, cycloalkylamino, halogen, alkyl, alkoxy, CF3; R5 and R6 are independently H, hydroxymethyl, Me, fluoromethyl; and certain derivs. thereof which are inhibitors of RNA-dependent RNA viral polymerase. These compds. are inhibitors of RNA-dependent RNA viral replication and are useful for the treatment of RNA-dependent RNA viral infection. They are particularly useful as inhibitors of hepatitis C virus (HCV) NS5B polymerase, as inhibitors of HCV replication, and/or for the treatment of hepatitis C infection. The invention also describes pharmaceutical compns. containing such nucleoside compds. alone or in

combination with other agents active against RNA-dependent RNA viral infection, in particular HCV infection. Also disclosed are methods of inhibiting RNA-dependent RNA polymerase, inhibiting RNA-dependent RNA viral replication, and/or treating RNA-dependent RNA viral infection with the nucleoside compds. of the present invention. Thus, 4-amino-1-(2-C-methyl-β-D-ribofuranosyl)-1H-pyrazolo[3,4-d]pyrimidine was prepared as inhibitors of RNA-dependent RNA viral polymerase. Representative compds. tested in the HCV NS5B polymerase assay exhibited IC's less than 100 μM. The compds. of the present invention were also evaluated for their ability to affect the replication of Hepatitis C Virus RNA in cultured hepatoma (HuH-7) cells containing a sub-genomic HCV Replicon.

IC ICM C12N

CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 7, 63

ST human cytotoxicity nucleoside prepn antiviral hepatitis C; cytotoxicity nucleoside prepn antiviral hepatitis C; nucleoside prepn inhibitor human RNA polymerase antiviral hepatitis C

IT Antiviral agents
Cytotoxicity
Fever and Hyperthermia
Hepatitis C virus
Human
Infection
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT RNA formation
(replication; preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT Infection
(viral; preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT 9026-28-2, RNA-dependent RNA Polymerase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Hepatitis C Virus NS5B; preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT 9026-93-1, Adenosine deaminase
RL: CAT (Catalyst use); USES (Uses)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT 2140-72-9P, 2'-O-Methylcytidine 120401-36-7P
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT 86-01-1P 147-94-4P 606-58-6P 961-07-9P 2004-07-1P
2140-71-8P 2140-79-6P 2504-55-4P 2564-35-4P 2946-39-6P
3258-05-7P 3868-32-4P 3868-33-5P 4016-63-1P 4209-30-7P
6736-58-9P 7013-16-3P 10058-66-9P 13191-15-6P 14675-48-0P
15676-18-3P 16220-07-8P 17210-68-3P 17434-81-0P 18417-89-5P
20724-73-6P 22423-10-5P 23197-98-0P 23567-96-6P 23567-97-7P
24121-00-4P 24909-13-5P 26383-05-1P 26889-39-4P 26889-42-9P
28072-46-0P 28072-49-3P 30948-06-2P 35874-49-8P 38819-10-2P
40725-89-1P 55968-37-1P 56039-11-3P 61210-21-7P 61468-90-4P

61556-44-3P 62160-23-0P 64183-27-3P 64526-34-7P 65114-35-4P
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RL: IMF (Industrial manufacture); PAC (Pharmacological activity);
SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent
human RNA viral polymerase)

IT 444020-91-1P 444020-92-2P 444020-93-3P 444020-94-4P
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444022-25-7P

RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT 90219-73-3P 90213-74-4P 115479-40-8P 115479-42-0P
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RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

IT 160526-82-9P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)
IT 94-99-5 872-50-4, 1-Methyl-2-pyrrolidinone, uses
RL: NUU (Other use, unclassified); USES (Uses)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)
IT 60-24-2, 2-Mercaptoethanol 69-33-0, Tubercidin 124-07-2, Octanoic acid, reactions 524-38-9, N-Hydroxyphthalimide 937-14-4, 3-Chloroperbenzoic acid 1618-36-6 2096-10-8, 2-Aminoadenosine 2380-63-4, 1H-Pyrazolo[3,4-d]pyrimidin-4-amine 3680-69-1 7057-33-2, 3'-Deoxycytidine 15397-12-3 18422-43-0 19393-83-0 40635-67-4, α-Acetoxyisobutyryl bromide 56039-06-6 68703-51-5 70384-51-9 79159-76-5 84955-31-7 85335-76-8 90358-16-0 102690-94-8 102731-45-3 127047-59-0 129786-41-0 153121-88-1 168427-36-9 171763-19-2 177414-97-0 213623-59-7 318246-79-6 443642-59-9 443642-76-0 444018-75-1 444018-91-1 444018-94-4 444018-97-7 444019-00-5 444019-07-2 444019-11-8 444019-14-1 444019-16-3 444019-18-5 444019-20-9 444019-22-1 444019-24-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)
IT 9012-90-2, DNA polymerase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α, β, and γ human; preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

L13 ANSWER 16 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 136:340939 MARPAT
TITLE: Preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation
INVENTOR(S): Stuyver, Lieven; Watanabe, Kyoichi A.
PATENT ASSIGNEE(S): Pharmasset Limited, USA
SOURCE: PCT Int. Appl., 230 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032920	A2	20020425	WO 2001-US46113	20011018
WO 2002032920	A3	20040219		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,

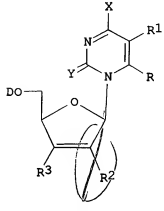
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002028749	A5	20020429	AU 2002-28749	20011018
US 2003087873	A1	20030508	US 2001-45292	20011018
EP 1411954	A2	20040428	EP 2001-987756	20011018

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR

PRIORITY APPLN. INFO.: US 2000-241488P 20001018
US 2001-282156P 20010406
WO 2001-US46113 20011018

GI



I

AB Modified nucleosides, e.g. I, wherein D is hydrogen, alkyl, acyl, monophosphate, diphosphate, triphosphate, monophosphate ester, diphosphate ester, triphosphate ester, phospholipid or amino acid; X is H, halogen, NH2, substituted amine, oxime, OH, alkoxy, SH, thioalkyl; Y is O, S, Se; R and R1 are independently H, alkyl, alkenyl, alkynyl, aryl, alkylaryl, halogen, NH2, substituted amine, oxime, hydrazine, OH, alkoxy, SH, thioalkyl, NO2, NO, CH2OH, CH2OH, ester, CONH2, amide, CN; R2 and R3 are independently H, halogen, OH, SH, OMe, SMe, NH2, NHMe, CH:CH2, CN, CH2NH2, CH2OH, CO2H; were prepared for treating a Flaviviridae (including BVDV and HCV), Orthomyxoviridae (including Influenza A and B) or Paramyxoviridae (including RSV) infection, or conditions related to abnormal cellular proliferation, in a host, including animals, and especially humans. This invention also provides an effective process to quantify the viral load, and in particular BVDV, HCV or West Nile Virus load, in a host, using real-time polymerase chain reaction ("TR-PCR"). Addnl., the invention discloses probe mols. that can fluoresce proportionally to the amount of virus present in a sample. Thus, (1'R,2'S,3'R,4'R)-1-[2,3-dihydroxy-4-(hydroxymethyl)cyclopentan-1-yl]-5-fluorocytosine was prepared and tested in vitro as antiviral and antitumor agent.

IC ICM C07H019-00
CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 7, 10, 63
ST cytotoxicity nucleoside prepn antiviral antitumor human antiinfluenza; polymerase chain reaction nucleoside prepn antiviral

antitumor human antiinfluenza; nucleoside preon antiviral antitumor human antiinfluenza Orthomyxoviridae Paramyxoviridae Flaviviridae

IT Antitumor agents
Antiviral agents
Cytotoxicity
Human
PCR (polymerase chain reaction)
West Nile virus
(preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT Nucleosides, preparation
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT Bovine diarrhea virus
Flaviviridae
Hepatitis C virus
Influenza A virus
Influenza B virus
Orthomyxoviridae
Paramyxoviridae
(treatment; preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT Infection
(viral, treatment; preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 50-91-9P 73-03-0P 131-06-6P 147-94-4P 316-46-1P 727-79-7P
957-77-7P 1445-07-4P 1826-95-5P 1868-36-6P 2096-10-8P
2133-80-4P 2341-22-2P 3066-86-2P 3080-29-3P 4097-22-7P
4298-10-6P 5399-87-1P 6554-11-6P 6982-08-7P 7057-48-9P
10212-18-7P 10212-19-8P 10212-22-3P 13491-41-3P 13491-43-5P
13491-46-8P 13491-47-9P 13957-31-8P 17676-66-3P 18427-02-6P
18829-84-0P 23899-77-6P 27921-78-4P 32791-81-4P 40632-26-6P
42867-68-5P 42867-78-7P 53766-80-6P 57100-18-2P 57729-40-5P
58461-29-3P 58461-30-6P 58461-34-0P 60301-51-1P 60786-47-2P
60786-48-3P 60786-49-4P 61037-75-0P 61246-68-2P 62156-19-8P
62600-09-3P 64891-48-1P 64937-63-9P 67036-59-3P 67036-60-6P
67036-61-7P 67036-62-8P 67036-65-1P 69321-95-5P 70421-27-1P
71184-20-8P 72877-50-0P 75059-22-2P 77180-78-0P 77210-26-5P
77210-27-6P 80229-06-7P 83966-93-2P 90597-22-1P 97416-31-4P
100570-76-1P 103884-98-6P 108273-51-4P 109407-91-2P
118191-23-4P 122757-54-4P 127517-33-3P 132722-95-3P
141684-96-0P 156407-85-1P 160963-01-9P 170157-95-6P
170421-82-6P 170421-84-8P 181377-89-9P 181377-90-2P
181785-90-0P 181785-91-1P 193754-19-7P 196085-98-0P
210474-57-0P 221617-05-6P 224317-26-4P 241806-22-4P
241806-28-0P 259261-22-8P 301826-38-0P 374107-80-9P
377748-74-8P 377748-75-9P 377749-00-3P 402725-23-9P
402725-26-2P 405238-72-4P 405238-74-6P 415704-31-3P
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415705-46-3P 415705-47-4P 415705-48-5P 415705-50-9P
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415705-71-4P 415705-72-5P 415705-73-6P 415705-74-7P
415705-75-8P 415705-77-0P 415705-78-1P

RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 415705-79-2P 415705-80-5P 415705-81-6P 415705-82-7P
415705-83-8P 415705-84-9P 415705-85-0P 415705-86-1P
415705-87-2P 415705-88-3P 415705-89-4P 415705-90-7P
415705-92-9P 415705-94-1P 415705-96-3P 415705-97-4P
415705-98-5P 415705-99-6P 415706-00-2P 415706-01-3P
415707-26-5P 415707-27-6P 415707-28-7P 415927-02-5P
415927-03-6P 415927-04-7P

RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 2627-64-7P 3258-02-4P 3803-28-9P 4710-75-2P 7057-27-4P
7057-33-2P 14057-25-1P 18829-83-9P 22855-06-7P 24514-26-9P
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128496-21-9P 161110-11-8P 175470-46-9P 223596-32-5P
405095-81-0P 405095-82-1P 405095-83-2P 405095-84-3P
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415704-33-5P 415704-34-6P 415704-35-7P 415704-36-8P
415704-37-9P 415704-38-0P 415704-40-4P 415704-41-5P
415704-43-7P 415704-44-8P 415704-45-9P 415704-46-0P
415704-47-1P 415704-48-2P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic

preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 51-21-8, 5-Fluorouracil 58-61-7, Adenosine, reactions 58-96-8, Uridine 65-71-4, Thymine 87-42-3, 6-Chloropurine 1005-56-7, Phenyl chlorothionoformate 3106-03-4, 5-Nitrouridine 3768-18-1 5432-33-7 6553-96-4, 2,4,6-Triisopropylbenzenesulfonyl chloride 10526-27-9 20031-21-4 42927-46-8 128114-98-7 223596-25-6 415704-42-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 417196-37-3 417196-38-4 417196-39-5 417196-40-8 417196-41-9 417196-42-0
RL: PRP (Properties)
(unclaimed sequence; preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

L13 ANSWER 17 OF 28 MARPAT COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 136:6296 MARPAT
TITLE: Preparation of antiviral nucleosides and methods for treating hepatitis C virus
INVENTOR(S): Sommadossi, Jean-Pierre; Lacolla, Paulo
PATENT ASSIGNEE(S): Novirio Pharmaceuticals Limited, Cayman I.; Universita degli Studi di Cagliari
SOURCE: PCT Int. Appl., 296 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001090121	A2	20011129	WO 2001-US16671	20010523
WO 2001090121	A3	20020502		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001074906	A5	20011203	AU 2001-74906	20010523
US 2003050229	A1	20030313	US 2001-864078	20010523
EP 1292603	A2	20030319	EP 2001-941564	20010523
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001011127	A	20030624	BR 2001-11127	20010523
NO 2002005627	A	20030106	NO 2002-5627	20021122
US 2004097461	A1	20040520	US 2003-602691	20030620

PRIORITY APPLN. INFO.: US 2000-206585P 20000523

US 2001-864078 20010523
WO 2001-US16671 20010523

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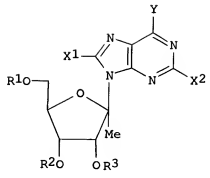


I

AB A method and composition for treating a host infected with hepatitis C comprising administering an effective hepatitis C treatment amount of a described 1'-, 2'- or 3'-modified nucleosides I, wherein : R1-R3 and R are independently H, phosphate (including mono, di- or triphosphate and a stabilized phosphate prodrug); acyl; alkyl; sulfonate ester including alkyl or arylalkyl sulfonyl including methanesulfonyl and benzyl, wherein the Ph group is optionally substituted with one or more substituents as described in the definition of aryl given herein; a lipid, including a phospholipid; an amino acid; a carbohydrate; a peptide; a cholesterol; or other pharmaceutically acceptable leaving group which when administered in vivo is capable of providing a compound wherein R1-R3 are independently H or phosphate; Y is hydrogen, bromo, chloro, fluoro, iodo, OR4, NR4R5 or SR4; X1 and X2 are independently selected from the group consisting of H, straight chained, branched or cyclic alkyl, CO-alkyl, CO-aryl, CO-alkoxyalkyl, chloro, bromo, fluoro, iodo, OR4, NR4R5 or SR4; and R4 and R5 are independently hydrogen, acyl, alkyl.or a pharmaceutically acceptable salt or prodrug thereof, is provided. Thus, I (R1-R3 = X1 = X2 = H, Y = NH2) was prepared and tested in Cynomolgus monkeys as antiviral agent. Oral bioavailability in monkeys, bone human bone marrow toxicity (IC50 > 10 μM), and mitochondrial toxicity, were reported .

IC ICM C07H
CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 15, 63
ST nucleoside antiviral prepn bone marrow mitochondrial toxicity
IT Hepatitis
(C; preparation of antiviral nucleosides and methods for treating hepatitis C virus)
IT Antiviral agents
Bone marrow
Drug bioavailability
Mitochondria
Toxicity

(preparation of antiviral nucleosides and methods for treating hepatitis C virus)

IT Nucleosides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antiviral nucleosides and methods for treating hepatitis C virus)

IT 36791-04-5, Ribavirin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of antiviral nucleosides and methods for treating hepatitis C virus)

IT 15397-12-3P 16848-12-7P 20724-73-6P 31448-54-1P 34441-68-4P 38946-83-7P 38946-84-8P 54401-19-3P 69123-98-4P 119410-84-3P 125911-76-4P 374750-27-3P 374750-28-4P 374750-29-5P 374750-30-8P 374750-31-9P 374750-32-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antiviral nucleosides and methods for treating hepatitis C virus)

L13 ANSWER 18 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 136:590 MARPAT
TITLE: Methods and compositions using modified nucleosides for treating flaviviruses and pestiviruses
INVENTOR(S): Sommadossi, Jean-Pierre; Lacolla, Paolo
PATENT ASSIGNEE(S): Novirio Pharmaceuticals Limited, Cayman I.; Universita Degli Studi Di Cagliari
SOURCE: PCT Int. Appl., 302 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001092282	A2	20011206	WO 2001-US16687	20010523
WO 2001092282	A3	20020502		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1294735	A2	20030326	EP 2001-952131	20010523

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2003060400	A1	20030327	US 2001-863816	20010523	
JP 2004510698	T2	20040408	JP 2002-500895	20010523	
NO 2002005600	A	20030117	NO 2002-5600	20021121	
US 2004063622	A1	20040401	US 2003-602693	20030620	
US 2004097462	A1	20040520	US 2003-602692	20030620	

PRIORITY APPLN. INFO.:

US 2000-207674P 20000526
US 2001-283276P 20010411
US 2001-863816 20010523
WO 2001-US16687 20010523

AB A method and composition are provided for treating a host infected with flavivirus or pestivirus, comprising administering an effective amount of a 1', 2' or 3'-modified nucleoside or a pharmaceutically acceptable salt or prodrug thereof.

IC ICM C07H019-00

CC 1-5 (Pharmacology)
Section cross-reference(s): 63

ST flavivirus pestivirus antiviral nucleoside deriv

IT Drug delivery systems
(capsules; nucleoside derivs. for treating flaviviruses and pestiviruses)

IT Toxicity
(drug; nucleoside derivs. for treating flaviviruses and pestiviruses)

IT Hematopoietic precursor cell
(erythroid burst-forming; nucleoside derivs. for treating flaviviruses and pestiviruses)

IT Hematopoietic precursor cell
(granulocyte-macrophage colony-forming; nucleoside derivs. for treating flaviviruses and pestiviruses)

IT Mitochondria
(mitochondrial toxicity; nucleoside derivs. for treating flaviviruses and pestiviruses)

IT Toxicity
(myelotoxicity; nucleoside derivs. for treating flaviviruses and pestiviruses)

IT Antiviral agents
Bovine diarrhea virus
Cytotoxicity
Drug bioavailability
Flavivirus
Pestivirus
(nucleoside derivs. for treating flaviviruses and pestiviruses)

IT Drug delivery systems
(tablets; nucleoside derivs. for treating flaviviruses and pestiviruses)

IT Bone marrow
(toxicity; nucleoside derivs. for treating flaviviruses and pestiviruses)

IT Drug delivery systems
(unit doses; nucleoside derivs. for treating flaviviruses and pestiviruses)

IT 15397-12-3 16848-12-7 20724-73-6 31448-54-1 69123-98-4, FIAU 119410-84-3 374750-30-8 374750-32-0
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological

activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside derivs. for treating flaviviruses and pestiviruses)
IT 125911-76-4 374750-27-3 374750-28-4 374750-29-5
RL: BSU (Biological study, unclassified); PKT (Pharmacokinetics); BIOL (Biological study)
(nucleoside derivs. for treating flaviviruses and pestiviruses)
IT 34441-68-4 38946-83-7 38946-84-8 54401-19-3 374750-31-9
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleoside derivs. for treating flaviviruses and pestiviruses)

L13 ANSWER 19 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 134:26053 MARPAT
TITLE: Oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization
INVENTOR(S): McGall, Glenn Hugh; Miyada, Charles Garrett; Cronin, Maureen T.; Tan, Jennifer Dee; Chee, Mark S.
PATENT ASSIGNEE(S): Affymetrix, Inc., USA
SOURCE: U.S., 35 pp., Cont.-in-part of U.S. Ser. No. 440,742, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 16
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6156501	A	20001205	US 1996-630427	19960403
WO 9511995	A1	19950504	WO 1994-US12305	19941026
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ				
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
EP 742287	A2	19961113	EP 1996-303245	19960509
EP 742287	A3	19971229		
R: DE, FR, GB, IT, NL				
US 2003232361	A1	20031218	US 2003-402333	20030327
US 2004072202	A1	20040415	US 2003-418414	20030822

PRIORITY APPLN. INFO.: US 1993-143312 19931026
US 1994-284064 19940802
WO 1994-US12305 19941026
US 1995-440742 19950510
US 1996-630427 19960403
US 2000-190166P 20000317
US 2000-608691 20000629
US 2001-810419 20010315

AB Oligonucleotide analog arrays attached to solid substrates and methods related to the use thereof are provided. The oligonucleotide analogs hybridize to nucleic acids with either

higher or lower specificity than corresponding unmodified oligonucleotides. Target nucleic acids which comprise nucleotide analogs are bound to oligonucleotide and oligonucleotide analog arrays. Examples include oligonucleotide probe arrays synthesized using VLSIPS (very large scale immobilized polymer synthesis), amplification of nucleic acid targets with incorporation of nucleotide analogs, and probe-target duplex thermostability anal.

IC C12Q001-68; C07H021-00
NCL 435006000
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 33
ST oligonucleotide analog probe array immobilized VLSIPS; nucleic acid hybridization oligonucleotide analog array; DNA target hybridization oligonucleotide analog array; RNA target hybridization oligonucleotide analog array; MeNPOC oligonucleotide analog array prepn VLSIPS
IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(2'-O-Me, immobilized, arrays; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)
IT Oligonucleotides
RL: RCT (Reactant); RACT (Reactant or reagent)
(2'-O-Me, reaction with DMT-Cl; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)
IT Oligonucleotides
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(5'-O-MeNPOC-2'-O-Me, preparation; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)
IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(analogs, immobilized, arrays; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)
IT Immobilization, biochemical
(light-directed chemical coupling, silane reagent, or other methods; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)
IT DNA microarray technology
Nucleic acid hybridization
Nucleic acid library
PCR (polymerase chain reaction)
(oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)
IT Nucleoside analogs
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target

improved hybridization)

IT DNA
Nucleic acids
RNA
cDNA
mRNA
rRNA
RL: ANT (Analyte); ANST (Analytical study)
(target; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 120-73-0D, 1H-Purine, derivs., oligonucleotides containing
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 890-38-0, 2'-Deoxyinosine 40615-36-9 69739-34-0 102691-36-1
151072-83-2 156549-47-2 156876-26-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 68-94-0DP, Hypoxanthine, oligonucleotides containing 289-95-2DP, Pyrimidine, derivs., oligonucleotides containing 452-06-2DP, 2-Aminopurine, oligonucleotides containing 890-38-0DP, 2'-Deoxyinosine, oligonucleotides containing 1904-98-9DP, 2-Aminoadenine, oligonucleotides containing 2537-04-4DP, 8-Aza-7-deazaguanine, oligonucleotides containing 4546-70-7DP, 2-Amino-2'-deoxyadenosine, oligonucleotides containing 5930-94-9DP, 3-Nitropyrrole, oligonucleotides containing 6146-52-7DP, 5-Nitroindole, oligonucleotides containing 86392-75-8DP, 7-Deaza-2'-deoxyguanosine, oligonucleotides containing 104826-08-6DP, 7-Aminoguanine, oligonucleotides containing 134700-29-1DP, 5-Propynyluracil, oligonucleotides containing 137422-58-3DP, Uridine, 2'-deoxy-5-(2-propynyl)-, oligonucleotides containing 151091-68-8DP, 5-Propynylcytosine, oligonucleotides containing 184895-86-1P 184895-88-3P 184895-91-8P 184895-92-9P 184895-94-1P 184895-95-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 236740-29-7 262415-24-7, GenBank AR149112 287948-14-5
311353-92-1, 1: PN: US6156501 SEQID: 1 unclaimed DNA 311353-93-2, 2: PN: US6156501 SEQID: 2 unclaimed DNA 311353-94-3, 3: PN: US6156501 SEQID: 3 unclaimed DNA 311353-95-4, 4: PN: US6156501 SEQID: 4 unclaimed DNA 311353-96-5, 5: PN: US6156501 SEQID: 5 unclaimed DNA 311353-99-8 311354-00-4 311354-01-5
311354-02-6 311354-03-7 311354-04-8 311354-05-9 311354-06-0
311354-07-1 311354-08-2 311354-09-3 311354-10-6 311354-11-7
311354-12-8 311767-49-4
RL: PRP (Properties)
(unclaimed nucleotide sequence; oligonucleotide analog probe

arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 311341-23-8 311341-24-9 311353-98-7 311767-48-3
RL: PRP (Properties)
(unclaimed sequence; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 20 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 130:334745 MARPAT
TITLE: Diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment
INVENTOR(S): Klecker, Raymond W.; Anderson, Lawrence; Katki, Aspandiar G.; Collins, Jerry M.
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
SOURCE: PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9923104	A2	19990514	WO 1998-US23109	19981030
WO 9923104	A3	20000210		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2307002	AA	19990514	CA 1998-2307002	19981030
AU 9914495	A1	19990524	AU 1999-14495	19981030
AU 758426	B2	20030320		
EP 1027365	A2	20000816	EP 1998-958451	19981030
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001522034	T2	20011113	JP 2000-518974	19981030
US 6703374	B1	20040309	US 2000-530276	20000428
US 2002022001	A1	20020221	US 2001-941550	20010830
US 6677314	B2	20040113		
US 2002034473	A1	20020321	US 2001-941571	20010830
US 6683045	B2	20040127		
US 2002119094	A1	20020829	US 2001-941552	20010830
US 2003049201	A1	20030313	US 2001-941721	20010830
US 6682715	B2	20040127		
US 2003095921	A1	20030522	US 2001-941551	20010830

US 6677315 B2 20040113
US 2002165199 A1 20021107
PRIORITY APPLN. INFO.: US 2002-122173 20020416
US 1997-63587P 19971030
WO 1998-US23109 19981030
US 2000-530276 20000428
US 2001-941552 20010830

AB The invention provides methods of diagnosing and/or of treating tumors by administering a nucleoside analog which is activated by thymidylate synthase and/or thymidine kinase enzyme into a diagnostic or toxic metabolite, as well as uridine analog compds. and compns. having a pharmaceutically acceptable carrier. For diagnostic applications, compds. containing a label, as well as methods of use of such compds., are described.

IC ICM C07H019-00
CC 8-9 (Radiation Biochemistry)
Section cross-reference(s): 1, 33, 63
ST nucleoside analog tumor imaging treatment; uridine analog tumor imaging treatment; thymidylate synthase nucleoside analog tumor therapeutic; kinase thymidylate nucleoside analog tumor therapeutic
IT Animal cell line
(CEM; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT Animal cell line
(K562; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT Animal cell line
(L-1210; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT Animal cell line
(Molt 4; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT Animal cell line
(Raji; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT Animal cell line
(U937; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT Antitumor agents
Cytoprotective agents
Drug delivery systems
Imaging agents
Neoplasm
Positron-emission tomography
(diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT Nucleoside analogs
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT DNA
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)

IT Drug delivery systems
(prodrugs; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT Animal tissue
(proliferation rate determination; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT Cell proliferation
(tissue proliferation rate determination; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT 9031-61-2, Thymidylate synthase
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT 50-89-5, Thymidine, biological studies 58-96-8D, Uridine, analogs 605-23-2, Ara-T 951-78-0, Deoxyuridine 3083-77-0, Ara-U 13981-56-1D, Fluorine-18, uridine analog labeled with, biological studies 69123-94-0 69256-17-3 224315-74-6D, analogs
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT 105307-51-5
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT 79551-89-6 94344-82-8
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT 224315-79-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT 54-42-2D, isotopically labeled 39547-64-3 224315-75-7 224315-76-8 224315-77-9 224315-78-0
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT 97614-44-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)
IT 7789-29-9D, Potassium fluoride (K(HF2)), labeled 10457-14-4 38078-09-0D, Diethylamino-sulfur trifluoride, labeled 94699-65-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; diagnostic or toxic metabolite-forming nucleoside analogs for tumor imaging and treatment)

L13 ANSWER 21 OF 28 MARPAT COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 128:295005 MARPAT
TITLE: Preparation of monocyclic L-nucleosides analogs as antiinflammatory agents and cytokine modulators
INVENTOR(S): Ramasamy, Kandasamy; Tam, Robert; Averett, Devron
PATENT ASSIGNEE(S): ICN Pharmaceuticals, USA; Ramasamy, Kandasamy; Tam, Robert; Averett, Devron
SOURCE: PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

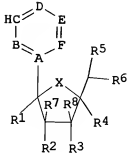
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9816186	A2	19980423	WO 1997-US18767	19971015
WO 9816186	A3	19980611		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9749867	A1	19980511	AU 1997-49867	19971015
AU 738170	B2	20010913		
BR 9712527	A	20000308	BR 1997-12527	19971015
SI 20076	C	20000430	SI 1997-20065	19971015
EP 1027359	A2	20000816	EP 1997-912762	19971015
EP 1027359	B1	20030423		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1268140	A	20000927	CN 1997-180619	19971015
NZ 334915	A	20001124	NZ 1997-334915	19971015
EP 1132393	A1	20010912	EP 2001-108303	19971015
EP 1132393	B1	20030409		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002503212	T2	20020129	JP 1998-518612	19971015
RU 2188828	C2	20020910	RU 1999-109459	19971015
EP 1254911	A1	20021106	EP 2002-7191	19971015
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 236921	E	20030415	AT 2001-108303	19971015
EP 1302474	A1	20030416	EP 2002-21991	19971015
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 238328	E	20030515	AT 1997-912762	19971015
JP 2003176296	A2	20030624	JP 2002-318773	19971015
PT 1027359	T	20030930	PT 1997-912762	19971015
ES 2195125	T3	20031201	ES 1997-912762	19971015
MX 9903434	A	20000731	MX 1999-3434	19990413
US 6130326	A	20001010	US 1999-291903	19990414
NO 9901785	A	19990615	NO 1999-1785	19990415

KR 2000049224	A	20000725	KR 1999-703326	19990416
HR 990147	A1	20010228	HR 1999-990147	19990514
HR 990147	B1	20020630		
HR 990148	A1	20010228	HR 1999-990148	19990514
HR 2000000420	A1	20001231	HR 2000-420	20000623
HR 20000420	B1	20020630		
HR 2000000422	A1	20001231	HR 2000-422	20000623
HR 20000422	B1	20020630		
HR 2000000423	A1	20001231	HR 2000-423	20000623
HR 20000423	B1	20020630		
US 6552183	B1	20030422	US 2000-633493	20000807
HK 1038365	A1	20030829	HK 2001-107955	20001028
HK 1028977	A1	20030926	HK 2000-106873	20001028
US 2002095033	A1	20020718	US 2001-969355	20011231
US 6573248	B2	20030603		
US 2003018186	A1	20030123	US 2002-120101	20020409
US 6642206	B2	20031104		

PRIORITY APPLN. INFO.:

US 1996-28585P	19961016
EP 1997-912762	19971015
JP 1998-518612	19971015
WO 1997-US18767	19971015
US 1999-291903	19990414
US 2000-633493	20000807
US 2001-969355	20011231

GI



I

AB Monocyclic L-nucleosides I (A = N, C; B, C, E, F = independently H, alkyl, alkylamine, Acetyl, alkenyl, aryl; D = CH, CO, N, S, Se, O, amine, CCONH2, CMe, P; X = O, S, CH2, imino; R1, R4 = H, CN, N3, CH2OH, alkyl, alkylamine; R2, R3, R4, R5-R8 = H, OH, CN, N3, halo, CH2OH, NH2, OMe, NHMe, ONHMe, SMe, SPh, alkenyl, alkyl, alkylamine, heterocycle) were prepared as antiinflammatory agents and cytokine modulators. Embodiments of these compds. are contemplated to be useful in treating a wide variety of diseases including infections, infestations, neoplasms, and autoimmune diseases. Viewed in terms of mechanism, embodiments of the novel compds. show immuno-modulatory activity, and are expected to be useful in modulating the cytokine pattern, including modulation of Th1 and Th2 response. Thus, activation-induced changes in IL-2, IL-4, TNFα, IL-8, INF-γ, by L-ribavirin are reported.

IC ICM A61K

CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 15
ST autoimmune disease monocyclic nucleoside analog prepn; cyclic nucleoside analog prepn immunomodulator cytokine
IT Nucleosides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(L-nucleosides; preparation of monocyclic L-nucleosides analogs as antiinflammatory agents and cytokine modulators)
IT Anti-inflammatory agents
Autoimmune disease
Immunomodulators
(preparation of monocyclic L-nucleosides analogs as antiinflammatory agents and cytokine modulators)
IT Cytokines
Interleukin 2
Interleukin 4
Interleukin 8
Tumor necrosis factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation of monocyclic L-nucleosides analogs as antiinflammatory agents and cytokine modulators)
IT 26578-10-9P 206269-27-4P 206269-31-0P 206269-34-3P
206269-36-5P 206269-38-7P 206269-40-1P 206269-42-3P
206269-44-5P 206269-46-7P 206269-49-0P 206269-51-4P
206269-57-0P 206269-60-5P 206269-65-0P 206269-68-3P
206269-71-8P 206269-75-2P 206269-79-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of monocyclic L-nucleosides analogs as antiinflammatory agents and cytokine modulators)
IT 70-23-5, Ethylbromopyruvate 123-06-8 762-42-5, Dimethyl acetylenedicarboxylate 20901-53-5 24259-59-4, L-Ribose 106302-03-8 206269-23-0 206269-24-1 206269-76-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of monocyclic L-nucleosides analogs as antiinflammatory agents and cytokine modulators)
IT 1080-79-1P 3080-30-6P 4343-74-2P 13148-05-5P, 3-Ethoxycarbonyl-2-oxopropylidenetriphenylphosphorane 176299-71-1P
206269-25-2P 206269-26-3P 206269-28-5P 206269-29-6P
206269-30-9P 206269-32-1P 206269-33-2P 206269-35-4P
206269-37-6P 206269-39-8P 206269-41-2P 206269-43-4P
206269-45-6P 206269-47-8P 206269-48-9P 206269-50-3P
206269-52-5P 206269-53-6P 206269-54-7P 206269-55-8P
206269-56-9P 206269-58-1P 206269-59-2P 206269-61-6P
206269-62-7P 206269-63-8P 206269-64-9P 206269-66-1P
206269-67-2P 206269-69-4P 206269-70-7P 206269-72-9P
206269-73-0P 206269-74-1P 206269-77-4P 206269-78-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of monocyclic L-nucleosides analogs as antiinflammatory agents and cytokine modulators)

L13 ANSWER 22 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 128:295004 MARPAT
TITLE: Preparation of purine L-nucleosides as modulators of Th1 and Th2 lymphokines
INVENTOR(S): Wang, Guangyi; Tam, Robert; Averttt, Deveron
PATENT ASSIGNEE(S): ICN Pharmaceuticals, USA; Wang, Guangyi; Tam, Robert; Avertt, Deveron
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9816184	A2	19980423	WO 1997-US18387	19971015
WO 9816184	A3	19980528		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2323791	AA	19980423	CA 1997-2323791	19971015
AU 9748999	A1	19980511	AU 1997-48999	19971015
AU 727177	B2	20001207		
CN 1233254	A	19991027	CN 1997-198831	19971015
EP 961775	A2	19991208	EP 1997-911684	19971015
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
SI 20024	C	20000229	SI 1997-20067	19971015
BR 9714349	A	20001114	BR 1997-14349	19971015
EP 1072607	A2	20010131	EP 2000-118428	19971015
EP 1072607	A3	20010912		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
NZ 505553	A	20011130	NZ 1997-505553	19971015
NZ 505554	A	20011130	NZ 1997-505554	19971015
JP 2001524936	T2	20011204	JP 1998-518475	19971015
JP 2002105096	A2	20020410	JP 2001-110027	19971015
RU 2183639	C2	20020620	RU 1999-109467	19971015
CA 2322053	AA	19980716	CA 1998-2322053	19980113
EP 1103559	A1	20010530	EP 2000-118252	19980113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
NZ 505531	A	20010831	NZ 1998-505531	19980113
JP 2002080490	A2	20020319	JP 2001-155321	19980113
EP 1277759	A1	20030122	EP 2002-21843	19980113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
NZ 505530	A	20030228	NZ 1998-505530	19980113
EP 1329220	A1	20030723	EP 2003-8818	19980113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				

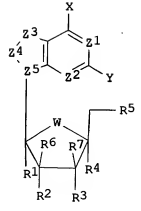
PT, IE, FI

ZA 9806641	A	20000124	ZA 1998-6641 19980724
NO 9901784	A	19990615	NO 1999-1784 19990415
KR 2000049181	A	20000725	KR 1999-703276 19990415
US 6455690	B1	20020924	US 2000-594647 20000615
US 6509320	B1	20030121	US 2000-594271 20000615
US 6479463	B1	20021112	US 2000-595364 20000616
HR 2000000421	A1	20001231	HR 2000-421 20000623
HR 20000421	B1	20020630	
AU 751742	B2	20020829	AU 2000-45137 20000705
CN 1286258	A	20010307	CN 2000-122458 20000726
CN 1296011	A	20010523	CN 2000-122459 20000726
NO 2000004326	A	19990615	NO 2000-4326 20000831
NO 2000004328	A	19990615	NO 2000-4328 20000831
US 2002058635	A1	20020516	US 2001-21772 20011030
JP 2004035546	A2	20040205	JP 2003-115258 20030421

PRIORITY APPLN. INFO.:

US 1996-28586P 19961016
US 1997-43974P 19970423
US 1997-55487P 19970812
US 1997-36094P 19970117
CA 1997-2266889 19971015
EP 1997-911684 19971015
JP 1998-518475 19971015
NZ 1997-505553 19971015
WO 1997-US18387 19971015
CA 1998-2278158 19980113
EP 1998-903474 19980113
JP 1998-531245 19980113
NZ 1998-336350 19980113
WO 1998-US634 19980113
US 1999-291907 19990414
US 1999-462714 19990709

GI



I

AB Purine L-nucleosides I (R1-R7 = independently H, OH, NH2, halogen, N3, CN, alkoxy, amine, NHNH2, NHOH, CHO, ester, amide, alkyl,

alkenyl, alkynyl, aryl, aralkyl; W = O, S, CH2, Se; Z1, Z2 = C, N, CH; Z3-Z5 = independently alkenyl, imine, O, S, Se, CO, CS, SO, N2; X, Y = independently H, OH, NH2, halogen, N3, SNH2, SONH2, SO2NH2, CN, ester, amide, alkoxy, NH2NH2, NHOH, alkyl, alkenyl, alkynyl, aryl, aralkyl) were prepared as modulators of Th1 and Th2 lymphokines. The novel compds. or pharmaceutically acceptable esters or salts thereof may be used in pharmaceutical compns., and such compns. may be used to treat an infection, and infestation, a neoplasm, or an autoimmune disease. The novel compds. may also be used to modulate aspects of the immune system, including modulation of Th1 and Th2. Thus, 8-allyloxy-β-L-guanosine was prepared and tested in vitro on IL-2 TNFα, IFN-γ, IL-4, and IL-5.

IC ICM A61K

CC 33-9 (Carbohydrates)
Section cross-reference(s): 15

ST purine nucleoside prepn modulator lymphokine immune

IT Nucleosides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of purine L-nucleosides as modulators of Th1 and Th2 lymphokines)

IT Interleukin 2
Interleukin 4
Interleukin 5
Lymphokines
Tumor necrosis factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation of purine L-nucleosides as modulators of Th1 and Th2 lymphokines)

IT 206185-33-3P 206185-43-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of purine L-nucleosides as modulators of Th1 and Th2 lymphokines)

IT 206185-45-7P 206185-46-8P 206185-54-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of purine L-nucleosides as modulators of Th1 and Th2 lymphokines)

IT 206185-73-1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of purine L-nucleosides as modulators of Th1 and Th2 lymphokines)

IT 315-30-0 24259-59-4, L-Ribose 30161-97-8 41729-52-6, 3-Deazaguanine 54738-73-7 56039-06-6 96555-36-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of purine L-nucleosides as modulators of Th1 and Th2

lymphokines)

IT 7602-04-2P 26287-72-9P 26578-09-6P 68979-47-5P 162491-62-5P
171866-28-7P 206185-31-1P 206185-32-2P 206185-34-4P
206185-36-6P 206185-40-2P 206185-49-1P 206185-51-5P
206185-52-6P 206185-57-1P 206185-58-2P 206185-65-1P
206185-70-8P 206185-71-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of purine L-nucleosides as modulators of Th1 and Th2 lymphokines)

IT 206185-35-5P 206185-38-8P 206185-53-7P 206185-60-6P
206185-62-8P 206185-67-3P 206185-68-4P 206185-69-5P
206185-72-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of purine L-nucleosides as modulators of Th1 and Th2 lymphokines)

L13 ANSWER 23 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 126:144046 MARPAT
TITLE: Beta-lactam preparation
INVENTOR(S): Harris, Michael Anthony; Saunders, Richard Neville
PATENT ASSIGNEE(S): Pfizer Limited, UK
SOURCE: Brit. UK Pat. Appl., 15 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2300856	A1	19961120	GB 1995-10126	19950516
PRIORITY APPLN. INFO.:			GB 1995-10126	19950516

OTHER SOURCE(S): CASREACT 126:144046
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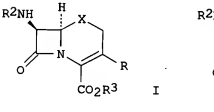

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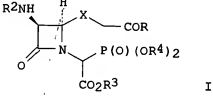


II

AB Title compds. I [R = substituent; R1 = H, OMe, NHCHO; R2 = acyl; CO2R3 = CO2H, CO2-; R3 = protecting group; X = S, SO, SO2, O, CH2] are prepared by base-induced cyclization of an azetidinone II [R4 = alkyl, aryl]. II are prepared from the halide and P(OR4)3. Thus, 4-methoxybenzyl (2RS)-2-hydroxy-2-[(3R)(4R)-3-phenylacetamido-4-[(RS)-2-tetrahydrofuryl]carbonylmethylthio]azetidin-2-on-1-ylacetate was converted to the chloride and then to the phosphonate which was cyclized with NaH in PhMe to give 50% I [R = (RS)-2-tetrahydrofuryl,

R1 = H, R2 = PhCH2CO, R3 = 4-MeC6H4CH2].
IC ICM C07D501-08
ICS C07D205-095; C07F009-568
CC 26-5 (Biomolecules and Their Synthetic Analogs)
ST azetidinylphosphonoacetate prepn cyclization; lactam beta prepn; cephem prepn azetidinylphosphonoacetate cyclization
IT Lactams
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(β-; preparation of cephems by cyclization of azetidinylphosphonoacetates with base)
IT 141060-89-1P 141060-90-4P 141060-91-5P 141060-92-6P
141060-94-8P 141060-95-9P 141060-96-0P 141060-97-1P
141061-21-4P 141082-16-8P 141082-17-9P 141082-18-0P
141082-20-4P 141082-21-5P 141082-22-6P 141082-24-8P
141082-25-9P 141096-60-8P 141096-61-9P 141194-55-0P
141195-77-9P 141195-78-0P 141507-42-8P 154568-89-5P
186689-39-4P 186689-40-7P 186689-41-8P 186689-42-9P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of cephems by cyclization of azetidinylphosphonoacetates with base)
IT 584-08-7, Potassium carbonate 7646-69-7, Sodium hydride 186689-30-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of cephems by cyclization of azetidinylphosphonoacetates with base)
IT 186689-31-6P 186689-32-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of cephems by cyclization of azetidinylphosphonoacetates with base)

L13 ANSWER 24 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 126:43598 MARPAT
TITLE: Oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization
INVENTOR(S): Mcgall, Glenn H.; Miyada, Charles G.; Cronin, Maureen T.; Tan, Jennifer D.; Chee, Mark S.
PATENT ASSIGNEE(S): USA
SOURCE: Eur. Pat. Appl., 43 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 16
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 742287	A2	19961113	EP 1996-303245	19960509
EP 742287	A3	19971229		
R: DE, FR, GB, IT, NL				
US 6156501	A	20001205	US 1996-630427	19960403
PRIORITY APPLN. INFO.:			US 1995-440742	19950510
			US 1996-630427	19960403

US 1993-143312 19931026
US 1994-284064 19940802
WO 1994-US12305 19941026

AB Oligonucleotide analog arrays attached to solid substrates and methods related to the use thereof are provided. The oligonucleotide analogs hybridize to nucleic acids with either higher or lower specificity than corresponding unmodified oligonucleotides. Target nucleic acids which comprise nucleotide analogs are bound to oligonucleotide and oligonucleotide analog arrays. Examples include oligonucleotide probe arrays synthesized using VLSIPS (very large scale immobilized polymer synthesis), amplification of nucleic acid targets with incorporation of nucleotide analogs, and probe-target duplex thermostability anal.

IC ICM C12Q001-68
ICS C07H021-00; B01J019-00

CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 33

ST oligonucleotide analog probe array immobilized VLSIPS; nucleic acid hybridization oligonucleotide analog array; DNA target hybridization oligonucleotide analog array; RNA target hybridization oligonucleotide analog array; MeNPOC oligonucleotide analog array prepn VLSIPS

IT Oligonucleotides
RL: RCT (Reactant); RACT (Reactant or reagent)
(2'-O-Me, reaction with DMT-Cl; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT Oligonucleotides
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(5'-O-MeNPOC-2'-O-Me, preparation; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT Genetic methods
(amplification; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(analogs, immobilized, arrays; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT Nucleic acids
RL: ANT (Analyte); ANST (Analytical study)
(analogs, target; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT Immobilization, biochemical
(light-directed chemical coupling, silane reagent, or other methods; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT Nucleic acid amplification (method)
Nucleic acid hybridization
Nucleic acid library

PCR (polymerase chain reaction)
(oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT Amplicon
RL: ANT (Analyte); ANST (Analytical study)
(oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT DNA
Nucleic acids
RNA
cDNA
mRNA
rRNA
RL: ANT (Analyte); ANST (Analytical study)
(target; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 68-94-0D, Hypoxanthine, oligonucleotide analogs, immobilized
120-73-0D, 1H-Purine, oligonucleotide analogs, immobilized
452-06-2D, 2-Aminopurine, oligonucleotide analogs, immobilized
4546-70-7D, 2-Amino-2'-deoxyadenosine, oligonucleotide analogs, immobilized 62160-23-0D, 7-Deazaguanosine, oligonucleotide analogs, immobilized 65367-85-3D, oligonucleotide analogs, immobilized 85426-74-0D, oligonucleotide analogs, immobilized
86392-75-8D, 7-Deaza-2'-deoxyguanosine, oligonucleotide analogs, immobilized
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 890-38-0DP, 2'-Deoxyinosine, oligonucleotide analogs, immobilized
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 184895-86-1P 184895-91-8P 184895-94-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and phosphitylation; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 184895-88-3P 184895-92-9P 184895-95-2P
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(preparation; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 40615-36-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with 2'-O-Me oligonucleotides; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

IT 156876-26-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with 2'-O-Me-3'-O-TBDMS oligonucleotides; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)
IT 69739-34-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with 2'-O-Me-5'-O-DMT oligonucleotides; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)
IT 102691-36-1, 2-Cyanoethyl N,N,N',N'-tetraisopropylphosphorodiamidite
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with 5'-O-MeNPOC-2'-deoxyinosine; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)
IT 890-38-0, 2'-Deoxyinosine 151072-83-2 156549-47-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with MeNPOC-chloride; oligonucleotide analog probe arrays immobilized on solid substrates, target nucleic acid analogs, and probe-target improved hybridization)

L13 ANSWER 25 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 124:15486 MARPAT
TITLE: Kits containing vascularization-inhibiting fumagillol derivatives and metabolism antagonist-type anticancer agents for cancer treatment
INVENTOR(S): Ikeyama, Shuichi; Yamaoka, Masuo; Yamamoto, Toshihiro
PATENT ASSIGNEE(S): Takeda Chemical Industries Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07242544	A2	19950919	JP 1994-31217	19940301

PRIORITY APPLN. INFO.: JP 1994-31217 19940301

AB Kits for cancer treatment comprise vascularization-inhibiting fumagillol derivs. such as 6-O-(N-chloroacetylcarbamoyl)fumagillol and metabolism antagonist-type anticancer agents such as 5-FU. As an example, 99g 6-O-(N-chloroacetylcarbamoyl)fumagillol and 719g maltosyl-β-cyclodextrin in 4950mL water were stirred at 25° for 3h and the resultant solution was filtered, filled into vials (5mL each), and freeze-dried. Sep., 5-FU 5mL each (50mg/mL) was filed into ampules. A set of anticancer drug kits comprises 5 ampules of 5-FU and 5 vials of 6-O-(N-chloroacetylcarbamoyl)fumagillol-maltosyl-β-cyclodextrin inclusion compound Combined i.v. administration of 6-O-(N-chloroacetylcarbamoyl)fumagillol (100mg/kg) and 5-fluorouracil (20mg/kg) to stomach cancer cell-bearing mice markedly inhibited the growth of the cancer cells in treated animals, compared to administration of 6-O-(N-

chloroacetylcarbamoyl)fumagillol (100mg/kg) or 5-fluorouracil (20mg/kg) alone.

IC ICM A61K031-335
ICS A61K031-38; A61K031-505; A61K045-06

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

ST kit anticancer fumagillol deriv metab antagonist

IT Neoplasm inhibitors
(kits containing vascularization-inhibiting fumagillol derivs. and metabolism antagonist-type anticancer agents for cancer treatment)

IT Pharmaceutical dosage forms
(freeze-dried, kits containing vascularization-inhibiting fumagillol derivs. and metabolism antagonist-type anticancer agents for cancer treatment)

IT Stomach, neoplasm
(inhibitors, kits containing vascularization-inhibiting fumagillol derivs. and metabolism antagonist-type anticancer agents for cancer treatment)

IT Pharmaceutical dosage forms
(injections, kits containing vascularization-inhibiting fumagillol derivs. and metabolism antagonist-type anticancer agents for cancer treatment)

IT Neoplasm inhibitors
(stomach, kits containing vascularization-inhibiting fumagillol derivs. and metabolism antagonist-type anticancer agents for cancer treatment)

IT 51-21-8, 5-FU 3094-09-5, Doxifluridine 12619-70-4D, Cyclodextrin, inclusion compds. with fumagillol derivs. 17902-23-7, Tegafur 61422-45-5, Carmofur 74578-38-4, UFT 104723-60-6D, Maltosyl-β-cyclodextrin, inclusion compds. with fumagillol derivs. 108102-51-8D, Fumagillol, derivs. 125991-51-7 132746-81-7, 6-O-(N-Chloroacetylcarbamoyl)fumagillol 137281-23-3 142186-14-9 150999-75-0
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(kits containing vascularization-inhibiting fumagillol derivs. and metabolism antagonist-type anticancer agents for cancer treatment)

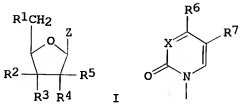
L13 ANSWER 26 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 121:180125 MARPAT
TITLE: anomerizing nucleosides
INVENTOR(S): Britton, Thomas Charles; Le Tourneau, Michael Edward
PATENT ASSIGNEE(S): Eli Lilly and Co., USA
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 587364	A1	19940316	EP 1993-306886	19930831
EP 587364	B1	19960605		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE

CA 2105112	AA	19940302	CA 1993-2105112	19930830
HU 65137	A2	19940428	HU 1993-2452	19930830
HU 214980	B	19980828		
IL 106840	A1	19980924	IL 1993-106840	19930830
BR 9303658	A	19940322	BR 1993-3658	19930831
JP 06157571	A2	19940603	JP 1993-215653	19930831
JP 3462893	B2	20031105		
AT 138929	E	19960615	AT 1993-306886	19930831
ES 2090880	T3	19961016	ES 1993-306886	19930831
US 5420266	A	19950530	US 1994-176981	19940103
			US 1992-938791	19920901

PRIORITY APPLN. INFO.:
OTHER SOURCE(S): CASREACT 121:180125
GI



I Q

AB A process for increasing the amount of beta-anomer nucleoside [I; R1 = H, alkyl, fluoro, azido, (un)protected OH; R2 = H, azido, alkyl, fluoro, (un)protected OH (provided that R3 cannot be fluoro, azido, or OH); R3 = H, azido, alkyl, fluoro, (un)protected OH (provided that R2 cannot be fluoro, azido, or OH); R4 = H, azido, alkyl, fluoro, (un)protected OH (provided that R5 cannot be fluoro, azido, or OH); R5 = H, azido, or, fluoro, (un)protected OH (provided that R4 cannot be fluoro, azido, or OH); Z = Q; X = N, CR8; R8 = H, alkyl; R6 = amino, alkylamino, dialkylamino, acylamino, N-acylalkylamino; R7 = H, alkyl, fluoro, alkenyl] from an alpha-anomer nucleoside or undesired anomeric mixture of nucleosides by contacting the anomer or anomeric mixture with a hydroxide base in an organic solvent. E.g., a solution of 1-(2'-deoxy-2',2'-difluoro-α-D-ribofuranosyl)-4-aminopyrimidin-2-one in MeOH was treated with anhydrous LiOH and the resulting mixture was refluxed; aliquots (0.100 mL, 1.40% of the total) were withdrawn at 0.33, 24.50, 51.25, 71.50, and 94.75 h (into the reaction), quenched with 5 mL 1N HCl, diluted to 100.0 m with water and assayed by HPLC; the yields of the α and β anomers and their anomeric ratios were tabulated; at 0.33 h the α:β anomeric ratio was 100.0 whereas at 94.75 h it was 53.47. Various hydroxides and organic solvents were used.

IC ICM C07H019-048
ICS C07H019-06
CC 33-9 (Carbohydrates)
ST A anomerizing nucleoside
IT Nucleosides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(anomerization of, in presence of hydroxide in organic solvent)

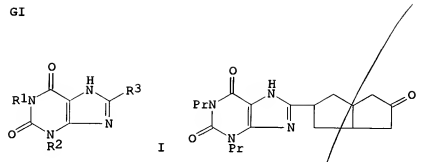
IT Epimerization and Anomerization
(of nucleosides in presence of hydroxide in organic solvent)
IT 95058-85-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(anomerization of, in presence of hydroxides in organic solvents)
IT 95058-81-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, via anomerization of the α isomer)
IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 7732-18-5, Water, uses
RL: USES (Uses)
(solvent, in anomerization of nucleosides)
IT 109-86-4, 2-Methoxyethanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(solvent, in anomerization of nucleosides)
IT 1310-58-3, Potassium hydroxide, uses 1310-65-2, Lithium hydroxide (LiOH) 1310-73-2, Sodium hydroxide, uses
RL: USES (Uses)
(use of, in anomerization of nucleosides)
IT 100-85-6, Benzyltrimethylammonium hydroxide 17194-00-2, Barium hydroxide 21351-79-1, Cesium hydroxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(use of, in anomerization of nucleosides)

L13 ANSWER 27 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 117:26198 MARPAT
TITLE: Preparation of [(poly)cyclic (oxa)alkyl]xanthines and analogs as adenosine antagonists
INVENTOR(S): Kuefner-Muehl, Ulrike; Stransky, Werner; Walther, Gerhard; Weber, Karl Heinz; Ensinger, Helmut; Kuhn, Franz Josef; Schingnitz, Guenter; Lehr, Erich
PATENT ASSIGNEE(S): Boehringer Ingelheim K.-G., Germany
SOURCE: Ger. Offen., 28 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4019892	A1	19920102	DE 1990-4019892	19900622
CA 2064742	AA	19911223	CA 1991-2064742	19910619
WO 9200297	A1	19920109	WO 1991-EP1131	19910619
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
EP 487673	A1	19920603	EP 1991-910772	19910619
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05501265	T2	19930311	JP 1991-510343	19910619
US 5641784	A	19970624	US 1994-362105	19941222

PRIORITY APPLN. INFO.:
DE 1990-4019892 19900622
WO 1991-EP1131 19910619
US 1992-834550 19920320
US 1993-168280 19931215

GI



I II

AB Title compds. [I; R1, R2 = alkyl, alkenyl, alkynyl; R3 = N-attached heterocyclyl, monosaccharide, cycloalkanone ketal; (poly)cyclic (oxa)alkyl, etc.] were prepared as adenosine antagonists (no data). Thus, 7-carboxyspiro[cis-bicyclo[3.3.0]octane-3,2'-(1,3-dithiolane)] (preparation given) was cyclocondensed with 5,6-diamino-1,3-dipropyluracil and the product hydrolyzed to give title compound II.

IC ICM C07D473-06
ICS C07D493-08; C07D493-18; C07D409-04; C07D339-00; A61K031-52; C07D519-00

ICI C07D493-08, C07D307-00; C07D493-18, C07D307-00, C07D325-00; C07D409-04, C07D339-06, C07D339-08; C07D519-00, C07D473-00, C07D493-00

CC 26-9 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1

ST xanthine polycyclicoxaalkyl prepn adenosine antagonist

IT Psychotropics
(psychoanaleptics, [(poly)cyclic (oxa)alkyl]xanthines and analogs)

IT Neurotransmitter antagonists
(purinergic A1, [(poly)cyclic (oxa)alkyl]xanthines and analogs)

IT 58-61-7, Adenosine, biological studies
RL: BIOL (Biological study)
(antagonists of, [(poly)cyclic (oxa)alkyl]xanthines and analogs as)

IT 19800-01-2P 24363-23-3P 84752-03-4P 91005-42-4P 141283-28-5P 141283-29-6P 141283-30-9P 141283-32-1P 141283-33-2P 141283-34-3P 141283-35-4P 141283-37-6P 141283-38-7P 141301-76-0P 141301-77-1P 141301-78-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in preparation of adenosine antagonists)

IT 127946-21-8P 141283-16-1P 141283-17-2P 141283-18-3P 141283-19-4P 141283-20-7P 141283-21-8P 141283-22-9P 141283-23-0P 141283-24-1P 141283-25-2P 141283-26-3P 141283-27-4P 141283-31-0P 141301-74-8P 141301-75-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as adenosine antagonist)

IT 77-55-4, 1-Phenylcyclopentanecarboxylic acid 110-00-9, Furan 140-88-5 2432-74-8, 6-Aminocapronitrile 4394-85-8, N-Formylmorpholine 13411-42-2, 2-Trimethylsilyl-1,3-dithiane 51716-63-3 72204-08-1 81250-33-1, 6-Amino-5-nitroso-1,3-dipropyluracil 81250-34-2, 5,6-Diamino-1,3-dipropyluracil 114298-52-1 117723-67-8 133058-72-7 141283-36-5,

7-Oxo-3-oxabicyclo[3.3.0]octane
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in preparation of adenosine antagonists)

L13 ANSWER 28 OF 28 MARPAT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 116:255397 MARPAT
TITLE: Preparation of 3-tetrahydrofurylcephem-3-carboxylates and analogs as antibiotics
INVENTOR(S): Bateson, John Hargreaves; Burton, George; Fell, Stephen Christopher Martin
PATENT ASSIGNEE(S): Beecham Group PLC, UK
SOURCE: PCT Int. Appl., 147 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9201696	A1	19920206	WO 1991-GB1228	19910722
W: AU, CA, CS, FI, HU, JP, KR, NO, PL, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2087967	AA	19920125	CA 1991-2087967	19910722
CA 2087967	C	20020910		
AU 9182224	A1	19920218	AU 1991-82224	19910722
AU 648329	B2	19940421		
ZA 9105725	A	19920624	ZA 1991-5725	19910722
EP 540609	A1	19930512	EP 1991-913583	19910722
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
HU 63628	A2	19930928	HU 1993-177	19910722
JP 05509305	T2	19931222	JP 1991-512368	19910722
JP 2851428	B2	19990127		
AT 185567	E	19991015	AT 1991-913583	19910722
ES 2137162	T3	19991216	ES 1991-913583	19910722
AP 832	A	20000503	AP 1991-305	19910722
W: BW, GM, GH, KE, LS, MW, SD, SZ, UG, ZM, ZW				
CN 1060469	A	19920422	CN 1991-105783	19910724
CN 1061046	B	20010124		
NO 9300226	A	19930323	NO 1993-226	19930122
US 6020329	A	20000201	US 1997-958864	19971020
CN 1223859	A	19990728	CN 1998-122407	19981114
CN 1111410	B	20030618		
US 6001997	A	19991214	US 1999-228138	19990111
US 6077952	A	20000620	US 1999-327667	19990608
GR 3031711	T3	20000229	GR 1999-402803	19991103

PRIORITY APPLN. INFO.:
GB 1990-16189 19900724
GB 1991-9540 19910502
WO 1991-GB1228 19910722
US 1993-934667 19930122
US 1995-470786 19950606
US 1997-958864 19971020
US 1999-228138 19990111

GI For diagram(s), see printed CA Issue.
AB Title compds. (I; R1 = H, MeO, HCONH; R2 = acyl; R3 = H, neg. charge, carboxy-protective group; R4 = ≤4 substituents

selected from alkyl, alkenyl, OH, halo, alkoxy, etc., X = O, CH2, SOn; n= 0-2; m = 1, 2) were prepared Thus, Na 2-(2-tritylaminothiazol-4-yl)-2-(Z)-trityloxyiminoacetate was condensed with tert-butyl (6R, 7R)-7-amino-3-[(R)-tetrahydrofuran-2-yl]ceph-3-em-4-carboxylate to give, after deprotection, (6R, 7R)-7-[2-(2-aminothiazol-4-yl)-2-(Z)-hydroxyiminoacetamido]-3-[(RS)-tetrahydrofuran-2-yl]ceph-3-em-4-carboxylic acid which had MIC of 0.50 and 0.25 μg/mL against Escherichia coli (NCTC 1048) and Staphylococcus aureus (Oxford), resp.

IC ICM C07D501-20
ICS C07D501-18; C07D463-00; A61K031-545; A61K031-435

CC 26-5 (Biomolecules and Their Synthetic Analogs)

ST cephemcarboxylate tetrahydrofuryl prepn antibiotic; tetrahydrofurylcephemcarboxylate prepn antibiotic antibacterial

IT Antibiotics
Bactericides, Disinfectants, and Antiseptics
(tetrahydrofurylcephemcarboxylates and analogs)

IT 1917-15-3P, 5-Methyl-2-furoic acid 2527-96-0P, Methyl 5-methyl-2-furoate 40053-81-4P 51673-83-7P, Tetrahydropyran-2-carboxylic acid 52449-98-6P 61834-13-7P, 5-Methyl-2-tetrahydrofuroic acid 90345-66-7P, 5-Acetoxymethylfuran-2-carboxylic acid 96382-83-1P 141060-98-2P 141060-99-3P
141061-00-9P 141061-01-0P 141061-02-1P 141061-03-2P
141061-04-3P 141061-05-4P 141061-07-6P, 2-(2-Chloroacetyl)tetrahydropyran 141061-08-7P 141061-09-8P
141061-10-1P 141061-11-2P 141061-12-3P 141061-13-4P
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141194-87-8P 141194-88-9P 141196-06-7P 141196-08-9P
141269-24-1P 142369-30-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in preparation of antibiotics)

IT 11111-12-9P, Cephalosporin
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as antibacterial agents)

IT 141060-89-1P 141060-90-4P 141060-91-5P 141060-92-6P
141060-93-7P 141060-94-8P 141060-95-9P 141060-96-0P
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141082-19-1P 141082-20-4P 141082-21-5P 141082-22-6P
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141082-27-1P 141082-28-2P 141082-29-3P 141096-60-8P
141096-61-9P 141194-55-0P 141195-77-9P 141195-78-0P
141195-79-1P 141195-80-4P 141195-81-5P 141433-36-5P
141506-89-0P 141506-90-3P 141507-42-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as antibiotic)

IT 590-97-6, Bromomethyl acetate 998-40-3, Tributylphosphine 2144-37-8, Methyl-5-chloromethyl-2-furoate 4412-96-8, 3-Methyl-2-furoic acid 6338-41-6, 5-Hydroxymethylfuran-2-carboxylic acid 6750-85-2, Furan-2,5-dicarboxylic acid monomethyl ester 7633-32-1, tert-Butylglyoxylate 16874-33-2 27460-85-1 34201-01-9 39684-61-2 40796-22-3, Pivaloyloxymethyl bromide 55730-73-9 61534-76-7, (3R,4R)-4-Mercapto-3-phenoxyacetamidoazetidin-2-one 62097-05-6 65872-41-5, 2-(2-Aminothiazol-4-yl)-2-(Z)-methoxyiminoacetic acid 66338-97-4, Sodium 2-(2-tritylaminothiazol-4-yl)-2-(Z)-trityloxyiminoacetate 68672-50-4 74643-21-3 79316-66-8 84089-73-6 87392-05-0 87392-07-2 89364-31-8 110615-35-5, 2-Tetrahydrofuranyltributylstannane 116252-39-2, 2-(Z)-Methoxyimino-2-(2-tritylaminothiadiazol-4-yl)acetic acid 118109-49-2, 2-(2-Aminothiazol-4-yl)-(Z)-pent-2-enoic acid 122553-60-0 141061-06-5, 2-(Z)-Methoxyimino-2-(2-tritylaminothiazol-4-yl)acetic acid hydrochloride 141072-62-0 141095-78-5, 4-Bromoacetyltetrahydropyran 141194-70-9 141196-07-8, 5-Methoxymethylfuran-2-carboxylic acid 162854-32-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in preparation of antibiotics)

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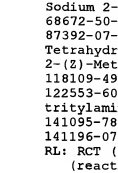
L9 STR



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MLEVEL   IS CLASS   AT   7  8  9
GGCAT    IS PCY  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT   IS E4 C  E2 N  AT   8
ECOUNT   IS E5 C  E4 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS  11

STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME:
ECLEVEL IS LIM ON ALL NODES
ALL RING(S) ARE ISOLATED

L14            0 SEA FILE=MARPATPREV SSS FUL L9 (MODIFIED ATTRIBUTES)

100.0% PROCESSED     20 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01
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L30         5521 S (?RIBOFURANOSYL?(L)(?PURINE? OR ?PYRIMIDINE?))/CNS

     FILE 'HCAPLUS' ENTERED AT 12:26:20 ON 24 MAY 2004
L17          697 SEA FILE=HCAPLUS ABB=ON  PLU=ON  METHYLRIBOFURANOSYL OR
                 (ME OR METHYL)(S)(RIBOFURANOSYL OR RIBO FURANOSYL)
L25        61546 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BETA D
L26          562 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17(S)L25
L27          183 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26(S)(PURINE OR
                 PYRIMIDINE OR NUCLEOSIDE)
L30         5521 SEA FILE=REGISTRY ABB=ON  PLU=ON  (?RIBOFURANOSYL?(L)(?PU
                 RINE? OR ?PYRIMIDINE?))/CNS
L31        19859 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30
L32           61 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L27 OR L31) AND
                 (FLAVIVIR? OR PESTIVIR? OR ANTIFLAVIVIR? OR ANTIPESTIVIR?
                  OR (FLAVI OR PESTI OR ANTIFLAVI OR ANTIPESTI)(W)(VIRUS
                 OR VIRID?) OR DENGUE OR WEST NILE OR (YELLOW OR BREAKBONE
                  OR BREAK BONE)(W)FEVER OR BVDV OR HEPATIT? C OR HCV OR
                 BOVINE VIRAL DIARRH? OR EGYPT 101 OR KUNJIN)
L33          10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND ADMIN?

L34           9 L33 NOT L5
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key terms

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L34  ANSWER 1 OF 9  HCAPLUS  COPYRIGHT 2004 ACS on STN
ED   Entered STN:  13 Feb 2004
ACCESSION NUMBER:          2004:120960  HCAPLUS
DOCUMENT NUMBER:           140:181711
TITLE:                     Preparation of bicyclo[4.2.1]nonane nucleoside
                           analogs for the treatment of
                           Flaviviridae infections
INVENTOR(S):               Wang, Peiyuan; Stuyver, Lieven J.; Watanabe,
                           Kyoichi A.; Hassan, Abdalla; Chun, Byoung-Known;
                           Hollecker, Laurent
PATENT ASSIGNEE(S):        Pharmasset, Ltd., Barbados
SOURCE:                    PCT Int. Appl., 147 pp.
                           CODEN: PIXXD2
DOCUMENT TYPE:             Patent
LANGUAGE:                  English
FAMILY ACC. NUM. COUNT:    2
PATENT INFORMATION:

     PATENT NO.          KIND  DATE          APPLICATION NO.   DATE
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     WO 2004013300       A2    20040212      WO 2003-US24324   20030801
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
            LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
            NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
            SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
            ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
            BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,
            LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM,
            GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     US 2004067877       A1    20040408      US 2003-632875    20030801
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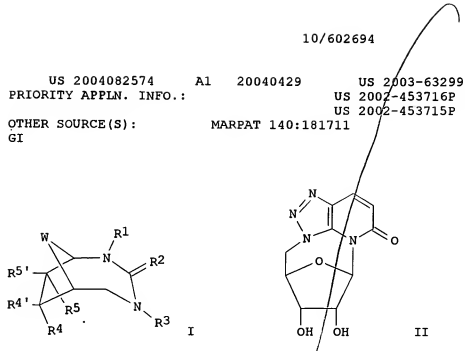
Searcher : Shears 571-272-2528

US 2004082574 A1 20040429 US 2003-632997 20030801
PRIORITY APPLN. INFO.: US 2002-453716P P 20020801
US 2002-453715P P 20020801
OTHER SOURCE(S): MARPAT 140:181711
GI



AB The disclosed invention is a bicyclo[4.2.1]nonane nucleoside analogs I, wherein R1 is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl or aminoacyl of C1-C6; R2 is oxygen, sulfur, -NR' or -CR'2, wherein each R' is independently H, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C1-C6; R3 is H, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl or aminoacyl of C1-C6; each R4, R4', R5, and R5' is independently H, halogen, pseudo-halogen, CN, NO2, lower alkyl of C1-C6, halogenated lower alkyl, hydroxy, alkoxy, CH2OH, CH2OR6, NH2, -NR6R7, or a residue of an amino acid; wherein at least one of R4 and R4' is H; each R6 and R7 is independently H, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl; and its pharmaceutically acceptable salt or prodrug, and its composition and method of use to treat **Flaviviridae** (Hepacivirus, **Flavivirus**, and **Pestivirus**) infections on a host, including animals, and especially humans. This, nucleoside analog II was prepared and **administered** at 5 mg/kg/day QD to chronically infected chimpanzees resulted in a significant reduction in viral load at day 4 and no change in hematol. or blood chemical parameters was observed

IT **29617-86-5P 91034-56-9P 150938-57-1P**
656808-89-8P 656808-94-5P 656809-43-7P
656809-47-1P 656809-50-6P 656809-74-4P
656809-75-5P 657394-48-4P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of bicyclo..nonane nucleoside analogs for the treatment of **flaviviridae** infections)

IT **58-96-8**, Uridine
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of bicyclo..nonane nucleoside analogs for the treatment of **flaviviridae** infections)

L34 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 12 Sep 2003
ACCESSION NUMBER: 2003:717751 HCAPLUS
DOCUMENT NUMBER: 139:240325
TITLE: Compositions and methods for treatment of **hepatitis c** virus-associated diseases
INVENTOR(S): Anderson, Kevin P.; Hanecak, Ronnie C.; Nozaki, Chikateru; Dorr, F. Andrew; Kwoh, T. Jesse
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S. Ser.No. 690,936.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003171313	A1	20030911	US 2001-853409	20010511
WO 9405813	A1	19940317	WO 1993-JP1293	19930910
W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KR, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
US 6284458	B1	20010904	US 1995-397220	19950309
US 6423489	B1	20020723	US 1995-452841	19950530
US 6391542	B1	20020521	US 1996-650093	19960517
US 6433159	B1	20020813	US 1997-823895	19970317
US 6174868-	B1	20010116	US 1997-988321	19971210
US 6608191	B1	20030819	US 2000-690936	20001018
US 2004049021	A1	20040311	US 2003-454293	20030604

PRIORITY APPLN. INFO.:

US 1992-945289	B2	19920910
WO 1993-JP1293	W	19930910
US 1995-397220	A2	19950309
US 1995-452841	A2	19950530
US 1996-650093	A2	19960517
US 1997-988321	A1	19971210
US 2000-690936	A2	20001018
JP 1993-87195	A	19930414
US 1995-453085	B1	19950530
US 2001-853409	A2	20010511

AB Antisense oligonucleotides are provided which are complementary to and hybridizable with at least a portion of **HCV** RNA and which are capable of inhibiting the function of the **HCV** RNA. These oligonucleotides can be **administered** to inhibit the activity of **Hepatitis C** virus in vivo or in vitro. These compds. can be used either prophylactically or therapeutically to reduce the severity of diseases associated with **Hepatitis C** Virus, and for diagnosis and detection of **HCV** and **HCV**-associated diseases. Methods of using these compds. are also disclosed.

IT **1463-10-1**, 5-Methyluridine
RL: RCT (Reactant); RACT (Reactant or reagent)
(compns. and methods for treatment of **hepatitis C** virus-associated diseases)

L34 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 30 May 2003
ACCESSION NUMBER: 2003:413956 HCAPLUS
DOCUMENT NUMBER: 138:396187
TITLE: Combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens
INVENTOR(S): Schaffer, Priscilla A.; Schang, Luis M.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 76 pp., Cont.-in-part of U.S. Ser. No. 951,058.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003099944	A1	20030529	US 2000-905687	20001206
WO 2000006170	A1	20000210	WO 1999-US16252	19990716
W: AU, CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.:

US 1998-94805P	P	19980731
US 1999-131264P	P	19990427
US 1999-140926P	P	19990624
WO 1999-US16252	A1	19990716
US 2000-656592	A2	20000907
US 2000-951058	A2	20000912

AB The invention relates to the identification of cdk inhibitors as inhibitors of pathogen gene expression, replication and reactivation. The invention also relates to the identification of a combination therapy to inhibit pathogen replication in which a drug that inhibits pathogen replication by targeting a specific pathogen-encoded protein is **administered** in combination with a drug that inhibits pathogen replication by targeting host-encoded cdk proteins. Compns. and assays for the identification and use of such inhibitors are provided as are methods of use of the inhibitors. Vero cells (mammalian cell line) were infected with 3 PFUs of either a wild-type or an antiviral drug-resistant strain of HSV-1. One hour after infection, cultures were washed with PBS and then refed with medium containing acyclovir (ACV) and with cellular cyclin-dependent kinase inhibitors Roscovitine (Rosco) or Purvalanol (Purv). The effects of either Rosco or Purv on inhibiting viral replication, when used in combination with ACV, were greater than when either Rosco or Purv were used alone. Importantly, the increased effects of Rosco and Purv were observed during treatment of ACV-susceptible wild-type HSV-1 (KOS) and during treatment of an ACV-resistant strain (TK-) of HSV-1.

IT **606-58-6,** Toyocamycin
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)
(cdk inhibitor; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

L34 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 28 Feb 2003
ACCESSION NUMBER: 2003:154642 HCAPLUS
DOCUMENT NUMBER: 138:198573
TITLE: Antisense oligonucleotides targeting **hepatitis C** virus RNA for treatment of infection
INVENTOR(S): Zhao, Genshi; Lu, Jin; Glass, John Irvin; Martinez, Alejandro; Yang, Yong
PATENT ASSIGNEE(S): Eli Lilly and Company, USA
SOURCE: PCT Int. Appl., 173 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003016572	A1	20030227	WO 2002-US21843	20020816

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-313076P P 20010817
US 2001-344116P P 20011220
US 2002-353750P P 20020201

AB Short double stranded RNA (dsRNA) oligonucleotides homologous to regions of **hepatitis C** virus target RNA polynucleotide sequences are provided. Also provided are methods of attenuating the expression of **hepatitis C** virus genes, attenuating the function of **hepatitis C** virus target RNA polynucleotide sequences required for virus infection, replication, or pathogenesis, and otherwise inhibiting **hepatitis C** virus by **administering** one or more of these short dsRNAs to prevent or treat **hepatitis C** virus infections in humans. In a preferred embodiment, the dsRNA oligonucleotides are 19 to 25 nucleotides in length and exhibit an IC50 of 0.0001 nM to 1 μM.

IT **58-96-8**, Uridine
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(as overhanging residues at 3' end of dsRNA oligonucleotide; antisense oligonucleotides targeting **hepatitis C** virus RNA for treatment of infection)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 12 Jul 2002
ACCESSION NUMBER: 2002:521462 HCAPLUS
DOCUMENT NUMBER: 137:88442
TITLE: Incensole and furanogermacrens and compounds in treatment for inhibiting neoplastic lesions and microorganisms
INVENTOR(S): Shanahan-Pendergast, Elisabeth
PATENT ASSIGNEE(S): Ire.
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053138	A2	20020711	WO 2002-IE1	20020102
WO 2002053138	A3	20020919		
W: AE, AG, AT, AU, BB, BG, CA, CH, CN, CO, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1351678	A2	20031015	EP 2002-727007	20020102
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004092583	A1	20040513	US 2004-250535	20040102
PRIORITY APPLN. INFO.:			IE 2001-2 A	20010102
			WO 2002-IE1 W	20020102

OTHER SOURCE(S): MARPAT 137:88442
AB The invention discloses the use of incensole and/or furanogermacrens, derivs. metabolites and precursors thereof in the treatment of neoplasia, particularly resistant neoplasia and immundysregulatory disorders. These compds. can be **administered** alone or in combination with conventional chemotherapeutic, antiviral, antiparasite agents, radiation and/or surgery. Incensole and furanogermacren and their mixture showed antitumor activity against various human carcinomas and melanomas and antimicrobial activity against Staphylococcus aureus and Enterococcus faecalis.
IT **53-79-2**, Puromycin **7724-76-7**, Riboprine
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical formulation further including; incensole and furanogermacrens and compds. as antitumor and antimicrobial agents)

L34 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 12 Jul 2002
ACCESSION NUMBER: 2002:521407 HCAPLUS
DOCUMENT NUMBER: 137:73237

TITLE: Single and combination therapy using drugs with target cellular proteins and drugs which target pathogen-encoded proteins
INVENTOR(S): Schaffer, Priscilla A.; Schang, Luis M.
PATENT ASSIGNEE(S): The Trustees of the University of Pennsylvania, USA
SOURCE: PCT Int. Appl., 153 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053096	A2	20020711	WO 2001-US47257	20011206
WO 2002053096	A3	20030130		

W: AU, CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR
PRIORITY APPLN. INFO.: US 2000-251623P P 20001206
US 2000-251653P P 20001206

AB The invention relates to the identification of cdk inhibitors as inhibitors of pathogen gene expression, replication and reactivation. The invention also relates to the identification of a combination therapy to inhibit pathogen replication in which a drug that inhibits pathogen replication by targeting a specific pathogen-encoded protein is **administered** in combination with a drug that inhibits pathogen replication by targeting host-encoded cdk proteins. Compns. and assays for the identification and use of such inhibitors are provided as are methods of use of the inhibitors.

IT **606-58-6**, Toyocamycin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

L34 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 24 Aug 2001
ACCESSION NUMBER: 2001:617773 HCAPLUS
DOCUMENT NUMBER: 135:175346
TITLE: Method for the treatment or prevention of **flavivirus** infections using nucleoside analogues
INVENTOR(S): Ismaili, Hicham Moulay Alaoui; Cheng, Yun-Xing; Lavallee, Jean-Francois; Siddiqui, Arshad; Storer, Richard
PATENT ASSIGNEE(S): Biochem Pharma Inc., Can.
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001060315	A2	20010823	WO 2001-CA197	20010219
WO 2001060315	A3	20030116		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001035278	A5	20010827	AU 2001-35278	20010219
EP 1296690	A2	20030402	EP 2001-907276	20010219

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2003523978	T2	20030812	JP 2001-559414	20010219
US 2002019363	A1	20020214	US 2001-785235	20010220
NO 2002003884	A	20021017	NO 2002-3884	20020816

PRIORITY APPLN. INFO.: US 2000-183349P P 20000218
WO 2001-CA197 W 20010219

OTHER SOURCE(S): MARPAT 135:175346

AB The present invention relates to a method for the treatment or prevention of **Flavivirus** infections using nucleoside analogs in a host comprising **administering** a therapeutically effective amount of the nucleoside analog or a pharmaceutically acceptable salt thereof.

IT **2004-07-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method for treatment or prevention of **flavivirus** infections using nucleoside analogs and their combination with other agents in relation to **hepatitis C** virus RNA-dependent RNA polymerase (NS5B protein))

L34 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 19 Jan 2001
ACCESSION NUMBER: 2001:45168 HCAPLUS
DOCUMENT NUMBER: 134:125928
TITLE: Antisense oligonucleotide compositions and methods for treatment and diagnosis of **hepatitis C** virus-associated diseases
INVENTOR(S): Anderson, Kevin P.; Hanecak, Ronnie C.; Nozaki, Chikateru
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: U.S., 23 pp., Cont.-in-part of U.S. Ser. No. 650,093.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6174868	B1	20010116	US 1997-988321	19971210
US 6284458	B1	20010904	US 1995-397220	19950309
US 6423489	B1	20020723	US 1995-452841	19950530
US 6391542	B1	20020521	US 1996-650093	19960517
US 6433159	B1	20020813	US 1997-823895	19970317
CA 2312698	AA	19990617	CA 1998-2312698	19981208
WO 9929350	A1	19990617	WO 1998-US26040	19981208
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9916323	A1	19990628	AU 1999-16323	19981208
AU 744317	B2	20020221		
EP 1035870	A1	20000920	EP 1998-960818	19981208
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001525192	T2	20011211	JP 2000-524019	19981208
US 6608191	B1	20030819	US 2000-690936	20001018
US 2003171313	A1	20030911	US 2001-853409	20010511
US 2004049021	A1	20040311	US 2003-454293	20030604

PRIORITY APPLN. INFO.:

US 1992-945289	B2	19920910
US 1995-397220	A2	19950309
US 1995-452841	A2	19950530
US 1996-650093	A2	19960517
JP 1993-87195	A	19930414
WO 1993-JP1293	W	19930910
US 1995-453085	B1	19950530
US 1997-988321	A	19971210
WO 1998-US26040	W	19981208
US 2000-690936	A2	20001018
US 2001-853409	A2	20010511

AB Antisense oligonucleotides are provided which are complementary to and hybridizable with at least a portion of **HCV** RNA and which are capable of inhibiting the function of the **HCV** RNA. These oligonucleotides can be **administered** to inhibit the activity of **Hepatitis C** virus in vivo or in vitro. These compds. can be used either prophylactically or therapeutically to reduce the severity of diseases associated with **Hepatitis C** virus, and for diagnosis and detection of **HCV** and **HCV**-associated diseases. Methods of using these compds. are also disclosed.

IT **1463-10-1**, (5-Methyluridine)
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; antisense oligonucleotide for treatment and diagnosis of **hepatitis C** virus-associated disease)

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L34 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 23 Jun 1999
ACCESSION NUMBER: 1999:388089 HCAPLUS
DOCUMENT NUMBER: 131:54014
TITLE: Antisense oligonucleotides for detection and treatment of **hepatitis C** virus-associated diseases
INVENTOR(S): Anderson, Kevin P.; Hanecak, Ronnie C.; Nozaki, Chikateru
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9929350	A1	19990617	WO 1998-US26040	19981208
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6174868	B1	20010116	US 1997-988321	19971210
CA 2312698	AA	19990617	CA 1998-2312698	19981208
AU 9916323	A1	19990628	AU 1999-16323	19981208
AU 744317	B2	20020221		
EP 1035870	A1	20000920	EP 1998-960818	19981208
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001525192	T2	20011211	JP 2000-524019	19981208

PRIORITY APPLN. INFO.:
US 1997-988321 A1 19971210
US 1992-945289 B2 19920910
US 1995-397220 A2 19950309
US 1995-452841 A2 19950530
US 1996-650093 A2 19960517
WO 1998-US26040 W 19981208

AB Antisense oligonucleotides are provided which are complementary to and hybridizable with at least a portion of **HCV** RNA and which are capable of inhibiting the function of the **HCV** RNA. These oligonucleotides can be **administered** to inhibit the activity of **Hepatitis C** virus in vivo or in vitro. These compds. can be used either prophylactically or therapeutically to reduce the severity of diseases associated with **Hepatitis C** virus, and for diagnosis and detection of **HCV** and **HCV**-associated diseases. Methods of using these compds. are also disclosed.

IT **1463-10-1**, 5-Methyluridine

Searcher : Shears 571-272-2528

RL: RCT (Reactant); RACT (Reactant or reagent)
(antisense oligonucleotides for detection and treatment of **hepatitis C** virus-associated diseases)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO' ENTERED AT 12:29:42 ON 24 MAY 2004)
L35 5 S L33
L36 4 DUP REM L35 (1 DUPLICATE REMOVED)

L36 ANSWER 1 OF 4 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2004-091086 [09] WPIDS
DOC. NO. CPI: C2004-037132
TITLE: New D-ribofuranosyl-9H-purine derivatives are RNA-dependent RNA viral polymerase inhibitors useful for treating RNA dependent RNA virus infection e.g. **hepatitis C** virus infection.
DERWENT CLASS: B02
INVENTOR(S): BHAT, B; ELDRUP, A B; MACCOSS, M; OLSEN, D B
PATENT ASSIGNEE(S): (ISIS-N) ISIS PHARM INC; (MERI) MERCK & CO INC
COUNTRY COUNT: 103
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2004003138	A2	20040108	(200409)*	EN	41

RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004003138	A2	WO 2003-US19776	20030623

PRIORITY APPLN. INFO: US 2002-392438P 20020627
AN 2004-091086 [09] WPIDS
AB WO2004003138 A UPAB: 20040205
NOVELTY - D-ribofuranosyl-9H-purine derivatives (I) and their salts are new.
DETAILED DESCRIPTION - D-ribofuranosyl-9H-purine derivatives of formula (I) and their salts are new.
Y = N or C-R17;
R1 = 2-4C alkenyl, 2-4C alkynyl (optionally substituted OH, NH2, 1-4C alkoxy, 1-4C alkylthio or 1-3F);
R2 = H, NH2, fluorine OH, mercapto, 1-4C alkoxy or 1-4C alkyl;

R3, R4 = H, CN, azido, halo, OH, mercapto, NH2, 1-4C alkoxy, 2-4C alkenyl, 2-4C alkynyl or 1-4C alkyl (optionally substituted with OH, NH2, 1-4C alkoxy, 1-4C alkylthio, or 1-3 F);

R5 = H, 1-10C alkylcarbonyl, P3O9H4, P2O6H3 or P(O)R11R12;

R6, R7 = H, methyl, hydroxymethyl, or CH3F;

R8 = H, 1-4C alkyl, 2-4C alkynyl, halo, CN, carboxy, 1-4C, alkyloxycarbonyl, azido, NH2, 1-4C alkylamino, di(1-4C alkyl)amino, OH, 1-6C alkoxy, 1-6C alkylthio, 1-6C alkylsulfonyl or (1-4C alkyl)0-2 aminomethyl;

R9 = H, OH, halo, 1-4C alkoxy, 1-4C alkylthio, NH2, 1-4C alkylamino, di(1-4C alkyl)amino, 3-6C cycloalkylamino or di(3-6C cycloalkyl)amino;

n = 0-2;

R10 = 1-4C alkylamino, (alkyl moiety is substituted with 1-3 halo) OCH2CH2SC(=O)1-4C alkyl, OCH2O(=O)O1-4C alkyl, OCH(1-4C alkyl)O(C=O)1-4C alkyl, NHCH(R13)(CH2)nCOOR4 or NHCH(R13)(CH2)nCONR15R16;

R13 = H, 1-4C alkyl or phenyl 0-2C alkyl;

R14 = H or 1-4C alkyl;

R15, R16, R18, R19 = H or 1-4C alkyl;

R11, R12 = OH, OCH2CH2SC(O)1-4C alkyl, OCH2O(C=O)O1-4C alkyl, NHCH(O-4C alkyl)CO21-3C alkyl, OCH(1-4C alkyl)O(C=O)1-4C alkyl, propane derivative of formula (a) or (b); and

R17 = H, halo, CN, nitro, NHCONH2, CONR18R19, CSNR18R19, COOR18, C(=NH)NH2, OH, 1-3C alkoxy, NH2, 1-4C alkylamino, di(1-4C alkyl)amino or 1-3C alkyl (optionally substituted with 1-3 of halo, NH2, OH, carboxy or 1-3C alkoxy).

An INDEPENDENT CLAIM is also included for a method of treating RNA-dependent RNA virus infection (especially **hepatitis C** virus (**HCV**) infection) comprising **administering** compound (I) optionally in combination with another agent active against **HCV**.

ACTIVITY - Antiinflammatory; Hepatotropic; Virucide.

MECHANISM OF ACTION - RNA-dependent RNA viral polymerase inhibitor; RNA-dependent RNA viral replication inhibitor; **Hepatitis C** virus (**HCV**) NS5B polymerase inhibitor; **HCV** replication inhibitor.

Compounds (I) were assessed to determine their **HCV** NS5B polymerase inhibitory activity using heteromeric RNA template. The median inhibitory concentration value for 2-(2-amino-6-(2,2,2-trifluoroethylamino)-9-(2-C-**methyl- beta - d-ribofuranosyl**)-9H-**purine** (Ia) was less than 100 micromolar.

USE - (I) are useful for the treatment of RNA dependent RNA virus infection, especially **HCV** infection (claimed).

ADVANTAGE - (I) show improved efficacy against chronic **HCV** infection.

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L36 ANSWER 2 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 1

ACCESSION NUMBER: 2002:149929 BIOSIS

DOCUMENT NUMBER: PREV200200149929

TITLE: **Hepatitis C** virus RNA-dependent RNA polymerase (NS5B) as a mediator of the antiviral activity of ribavirin.

AUTHOR(S): Maag, David; Castro, Christian; Hong, Zhi; Cameron, Craig E. [Reprint author]

CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Pennsylvania State University, University Park, PA, 16802, USA
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SOURCE: Journal of Biological Chemistry, (December 7, 2001) Vol. 276, No. 49, pp. 46094-46098. print.
CODEN: JBCHA3. ISSN: 0021-9258.

DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 14 Feb 2002
Last Updated on STN: 26 Feb 2002

AB Ribavirin is **administered** in combination with interferon-alpha for treatment of **hepatitis C** virus (**HCV**) infection. Recently, we demonstrated that the antiviral activity of ribavirin can result from the ability of a viral RNA polymerase to utilize ribavirin triphosphate and to incorporate this nucleotide with reduced specificity, thereby mutagenizing the genome and decreasing the yield of infectious virus (Crotty, S., Maag, D., Arnold, J. J., Zhong, W., Lau, J. Y., Hong, Z., Andino, R., and Cameron, C. E. (2000) Nat. Med. 6, 1375-1379). In this study, we performed a quantitative analysis of a novel **HCV** RNA polymerase derivative that is capable of utilizing stably annealed primer-template substrates and exploited this derivative to evaluate whether lethal mutagenesis of the **HCV** genome is a possible mechanism for the anti-**HCV** activity of ribavirin. These studies demonstrate **HCV** RNA polymerase-catalyzed incorporation of ribavirin opposite cytidine and uridine. In addition, we demonstrate that templates containing ribavirin support CMP and UMP incorporation with equivalent efficiency. Surprisingly, templates containing ribavirin can also cause a significant block to RNA elongation. Together, these data suggest that ribavirin can exert a direct effect on **HCV** replication, which is mediated by the **HCV** RNA polymerase. We discuss the implications of this work on the development of nucleoside analogs for treatment of **HCV** infection.

L36 ANSWER 3 OF 4 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 96293165 EMBASE
DOCUMENT NUMBER: 1996293165

TITLE: Pseudouridine for monitoring interferon treatment of patients with chronic **hepatitis C**

AUTHOR: Colonna A.; Guadagnino V.; Maiorano A.; Stamile E.; Costa C.

CORPORATE SOURCE: Dipto. di Farmacologia Sperimentale, Universita di Napoli Federico II, Via D. Montesano 49,I-80131 Napoli, Italy

SOURCE: European Journal of Clinical Chemistry and Clinical Biochemistry, (1996) 34/9 (697-700).
ISSN: 0939-4974 CODEN: EJCBEO

COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology

029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index
048 Gastroenterology

LANGUAGE: English
SUMMARY LANGUAGE: English

AB Pseudouridine is a modified nucleoside derived from RNA catabolism; the concentration of this nucleoside is elevated in body fluids of both tumour-bearing and human immunodeficiency virus (HIV) infected patients. We used an HPLC procedure to evaluate the serum pseudouridine concentration in patients with chronic **hepatitis C** in an attempt to determine whether the nucleoside serum concentration was related to the response to α-interferon treatment. We found that: a) pseudouridine serum concentration was increased significantly in 76% (29/39) of patients with chronic **hepatitis C** at the time of diagnosis and before any therapeutic treatment; b) pseudouridine excretion was higher in patients affected by chronic **hepatitis C** with cirrhosis; c) there was a positive correlation between response to therapy and pseudouridine serum concentration in patients undergoing treatment with α-interferon; d) during one year of α-interferon treatment, the pseudouridine serum concentration remained within the normal range in responder patients. These results indicate that serum pseudouridine might be useful as a valuable biochemical marker with which to monitor chronic **hepatitis C** patients treated with α-interferon.

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ACCESSION NUMBER: 95177812 EMBASE
DOCUMENT NUMBER: 1995177812
TITLE: **Hepatitis C** and immune globulin [2].
AUTHOR: Douglas S.D.; Slade H.B.; Lopez-Jimenez J.; Odriozola J.; Perez-Oteyza J.; Garcia-Larana J.; Prince A.M.; Horowitz B.; Bjoro K.; Froland S.S.; Schiff R.I.
CORPORATE SOURCE: Children's Hospital of Philadelphia,Philadelphia, PA 19104, United States
SOURCE: New England Journal of Medicine, (1995) 332/18 (1235-1237).
ISSN: 0028-4793 CODEN: NEJMAG
COUNTRY: United States
DOCUMENT TYPE: Journal; Letter
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
038 Adverse Reactions Titles
048 Gastroenterology
LANGUAGE: English

FILE 'HOME' ENTERED AT 12:30:51 ON 24 MAY 2004